S. Hrg. 101-865, Pt. 2

DEPARTMENT OF TRANSPORTATION AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1991

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

SECOND SESSION

ON

H.R. 5229

AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENT OF TRANSPORTATION AND RELATED AGENCIES FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1991, AND FOR OTHER PURPOSES

PART 2 (Pages 1–958)

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General Accounting Office
National Transportation Safety Board

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DEPARTMENT OF TRANSPORTATION AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1991

THURSDAY, APRIL 26, 1990

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:10 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Frank R. Lautenberg (chairman) presiding.

Present: Senator Lautenberg.

GENERAL ACCOUNTING OFFICE

STATEMENTS OF:

KENNETH M. MEAD, DIRECTOR, TRANSPORTATION ISSUES, RESOURCES, COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION

JAYETTA HECKER, DIRECTOR, RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT INFORMATION SYSTEMS

ACCOMPANIED BY:

ALLEN LI, ASSISTANT DIRECTOR
ROBERT SHIDELER, ASSISTANT DIRECTOR
ROBERT WURSTER, SENIOR EVALUATOR
JOHN KALMAR, SENIOR EVALUATOR
YVONNE PUFAHL, SENIOR EVALUATOR
JOEL WILLEMSSEN, ASSISTANT DIRECTOR
RONA STILLMAN, CHIEF SCIENTIST

OPENING REMARKS

Senator LAUTENBERG. We are going to be hearing today from the representatives of the General Accounting Office [GAO]. The primary witnesses will be Ken Mead, the Director of Transportation Issues in the Resources, Community and Economic Development Division and JayEtta Hecker, Director of Resources, Community and Economic Development Information Systems in the Information Management and Technology Division. That is a long title. It takes more than one business card to handle that.

These two divisions are doing quite a bit of work for this subcommittee and have been of tremendous help to us, and I appreciate it, in evaluating the various and diverse projects that make up the administration's annual budget request for transportation.

Their work force reviews a number of agencies, but today we are going to primarily focus on programs that are part of the FAA's facilities and equipment funding request.

To put today's hearing in perspective, let us look at a couple of facts. The administration's budget request for FAA's operation is $4.1 billion, approximately $265 million, or 7 percent, more than that provided this fiscal year. For the facilities and equipment procurement section the administration is requesting $2.5 billion, about $750 million, or 45 percent, more than was provided in this fiscal year. The question is whether or not these requests are realistic. Are they doable?

Within the subcommittee's overall spending constraints we have a serious issue. We would love to spend money on improvement in aviation, but according to the administration's budget, these investments are going to come out of other accounts, increases of over $1 billion, eliminating two programs of great importance, two programs that this subcommittee will just not eliminate—Amtrak and transit operating subsidies for cities of greater than 1 million in population.

But we are just not going to permit that to happen, so we have got to carefully review FAA's request once again. In spite of the fact that we are very supportive of investments in aviation, we also think that the Government and the taxpayer is entitled to good value for their money and I am not so sure we are getting everything that we expected.

So we will be examining that very closely, and unless there is a windfall—from whence it cometh I know not, but it does not—I have not heard any rumblings about someone leaving a huge deposit on our doorstep. So we will examine these requests in detail. Your testimony is going to be of enormous help there in helping us get to the facts here.

Next week we are going to be asking the FAA Administrator, Admiral Busey, some questions. It is particularly disturbing that the National Airspace System plan, which in 1981 was projected to be a 10-year effort costing $12 billion, is now estimated to cost about $27 billion and is not going to be completed until the next century. Now, I am pledged to see this thing through, so we better get going on this project.

That is not the whole story. Since new laborsaving equipment is behind schedule by as much as 4 years, more and more reliance is being placed on FAA personnel. Unfortunately, we will hear that in this area FAA also is not up to speed.

Controller and inspector staffing shortages persist—almost 2,000 people short of its 1990 goal to have 12,275 full performance controllers [FPL's]. And FAA is 250 people short of the targeted 3,000-inspector work force, and 1,500 people short of the necessary 10,000 maintenance technicians.

We do not point a finger, necessarily, at the present regime—Secretary Skinner and Admiral Busey—but I would be remiss, however, if I did not raise these questions and ask what is happening. There is too much at stake. Not just the dollars involved, but more importantly, safety, efficiency, and the expansion of the air travel system.

So whether we are talking about delays or more serious near midair collisions, runway incursions, or aging aircraft that needs to be inspected, the subcommittee will have to provide the resources necessary to cure these problems, but we need a better flight plan than the one we have—the one that has been provided thus far by FAA.

That is why you are here today. GAO is here to help us develop a better flight plan. So we welcome you both, and your staff. We always find that we get good straight answers. We do not always find that people on the other side agree with you, but that is not your task, to be agreeable. Your task is to arm me with the appropriate facts, and we look forward, Mr. Mead, to your testimony, and Ms. Hecker, yours as well.

So in summary form, we would like your testimony, and you know that the full statement, as usual, will be included in the record.

STATEMENT OF KENNETH MEAD

Mr. MEAD. Thank you, Mr. Chairman. It is good to see you again. I enjoyed working with Mr. McCann and others on the subcommittee staff over the years.

I would like to introduce my colleagues at the table. Some of these folks you may have met before. On my left is Allen Li. He directs our work in the airport and airspace capacity area and oversees our modernization work; Bob Wurster of his staff, Mr. Shideler on the far left. He directs our work in the FAA work force area.

On Ms. Hecker's staff, Joel Willemssen and Rona Stillman, who is GAO's chief scientist. The Information Management Division of GAO is of enormous assistance to us in focusing very intensely on individual systems that FAA is about to procure that have a strong information management component.

I also have with me today John Kalmar, who leads our rail work should there be some questions on Amtrak, and Yvonne Pufahl, who leads our work on highways.

Our testimony will, as you have pointed out, Mr. Chairman, focus primarily on modernization and operation of the ATC system. Together, they account for about 80 percent of FAA's $8.3 billion budget request. That is up from $7.1 billion in 1990 and $6.4 billion in 1989, a rather substantial increase.

In addition, because this subcommittee faces important decisions on Interstate preservation and Federal assistance to Amtrak, at the conclusion of my testimony I would like to make a couple of observations on those areas as well.

In the FAA area, producing the new air traffic system continues to take longer than expected. Most major systems have experienced another round of delays this past year. This phenomenon has necessitated a set of interim or bridge-like projects that we will be discussing later.

Also, FAA has not yet identified the number of people that it will need to bring modernization projects on line at the field. That is important, because even if the system does get produced and delivered, it needs to be installed.

Second, FAA continues to experience problems maintaining an adequately trained work force. We will focus this year not just on the numbers, but on the training as well. Both issues are quite critical. In fact, the training issue is so serious that we think it is affecting the pace at which FAA can responsibly hire more people.

In the highway area, maintaining the Federal investment in the Interstate System is one of our paramount transportation responsibilities. We have done some recent work indicating the status of maintenance and preservation activities, and how they are lagging. The Interstate System right now, about 40 percent of it, is in fair or worse condition, and that is defined as providing a barely tolerable or worse ride.

In the case of Amtrak, the planned revenue enhancements just will not cover the railroad's needs in the near future.

MODERNIZATION OF THE AIR TRAFFIC CONTROL SYSTEM

When we entered the 1980's, FAA was faced with old equipment being stressed to the limit. To cope, it launched the NAS plan. Entering the 1990's, FAA has made progress, but most of the benefits envisioned are yet to be realized and modernization problems are continuing.

Delays in bringing new systems on line persist. Some perspectives on this, Mr. Chairman: On average, the NAS systems have slipped 2½ years as we entered 1989. In 1989, 8 of the 12 major systems slipped an additional 200 days. The range of overall slippage is from 1 to 6 years. In part, these problems stem from FAA's past practice of committing systems to production without adequately testing prototypes.

FAA has recently taken a step that could help in this regard. They have designated an individual as the Executive Director for Acquisition. His responsibility will be to independently test the systems before commitments are made to production.

We think that is an improvement. But, nonetheless, that will not cure the problems that we have experienced to date with systems already committed to production. FAA vendors are also experiencing a variety of technical problems in developing hardware and software. That's the case with AAS and Mode S projects. Ms. Hecker will testify later that 5 years after contract award, the Mode S vendor has yet to build one device capable of meeting FAA's requirements.

And, of course, the impact of the project delays is clear. The benefits to the traveling public and to FAA's work forces must be postponed.

The delays, the original design deficiencies and the changing nature of air travel, such as the implementation of the hub-and-spoke concept drove the estimated costs of the air traffic control modernization to about $27 billion, as you pointed out earlier, and it did push completion of some of the original projects right into the next century. In addition, it has caused FAA to add short term interim or bridging-type projects.

We are reviewing one of the largest of these short-term projects which they have called the interim support plan. FAA calls it the ISP for short. You get that straight. You have the NAS plan and you have the ISP. The ISP is sort of a miniplan to help the larger plan along.

The ISP is a conglomeration of projects that is directed primarily at coping with maintenance and capacity problems at terminal radar approach control facilities until the long-term modernization projects come on line. Yet, in our view, the ISP projects are likely not to meet—in fact, are virtually certain not to meet—all of FAA's short-term needs. And the ones that they have already funded are, themselves, behind schedule.

That is because FAA did not complete a comprehensive review of its short-term or interim needs before they requested the funding or before the projects were initiated. In fact, Martin Marietta, the FAA systems engineering and integration contractor did a cost benefit analysis of 7 of the 12 projects. Of the 12 projects, they concluded that 7 of the 12 were not cost beneficial. FAA proceeded with them anyway.

I think, as you were suggesting at the beginning of your statement, the dollars are not unlimited here. Most of the existing projects are going to keep the F&E requests at between $2.5 to $3 billion for the next 5 years. We think, therefore, that cost/benefit justifications will become an increasingly important issue, particularly if FAA does not get all the money that they ask for.

Mr. Chairman, I think this year FAA has a good opportunity to make a major improvement in the management of the modernization effort. Acting on one of our recommendations, FAA is developing the capital investment plan. This plan will include the totality of the modernization effort. You may recall that over the last 2 or 3 years there has been an issue about just what the modernization effort entails. You have the National Airspace System plan which contains some of the modernization projects, but not all, and now we have the interim support plan which contains some other modernization projects.

Admiral Busey has decided, and we think properly so, that the totality of the modernization effort has to be brought together into one plan. Now, they are working on that at FAA, and it is due out toward the end of this fiscal year——

Mr. Li. In the fall.

Mr. Mead. In the fall, Allen says.

This new approach offers FAA an opportunity to do more for you than just tell you what all their projects are. It is a good opportunity to make more meaningful the modernization goals and develop a strategy to measure progress in meeting those goals. And we suggest that those goals should focus on the benefits the flying public will receive, not just on the issue of whether a project is on schedule or not, not just on the issue of whether there is a cost overrun or how many contracts have been awarded.

FAA needs to set relative priorities on the basis of benefit/cost ratios, mission needs and safety considerations. And when they decide to go forward with a project that does not meet cost/benefit criteria, they need to tell you that so you can make the policy decision of whether to go forward or not.

NAS FIELD IMPLEMENTATION

I should talk about the staffing needed to bring these new systems on line for a moment. The agency does not have a handle on the number of staff they need to install and test the new equipment and to train the new controllers in its operation. We have seen a draft FAA study that suggests substantial shortfalls, but FAA has not acted yet to address those, and there is a good-news story here, Mr. Chairman, and a bad-news story.

I think the good news is that the continued delays in the modernization program have saved FAA from facing the consequences of not having enough people to install the equipment or prepare the sites and train the controllers and others in the equipment's use. The bad news is that a number of these systems are going to be showing up rather soon, and FAA will have that equipment at its disposal, and it will either not be installed or it will go unused.

Also, as we reported last year, FAA does not yet have an information system capable of giving accurate information for planning implementation activities, and that is not just a nice thing to have. I would like to give an example of why this is important through an illustration of the Charlotte Airport situation.

A new landing system is in storage there because the site preparation work had not been done when the equipment showed up. The reason for this is that the regional people, who would be responsible for preparing this site, delayed preparing the site for installation and the reason they did that was because the FAA information system said that the contractor was about 17 months behind schedule. But FAA, without telling the region or fixing its information system, arranged for the purchase of the landing system from some other contractor, and so it showed up, but it's now in storage.

Senator LAUTENBERG. When did it show up?

Mr. MEAD. Was it December?

Mr. WURSTER. February.

Mr. MEAD. February. It will probably be about a 5- or 6-month delay in getting it up.

Senator LAUTENBERG. Is it stored at the airport?

Mr. MEAD. Pardon me?

Senator LAUTENBERG. Stored at the airport?

Mr. MEAD. Yes.

Senator LAUTENBERG. How much was that, the hardware?

Mr. MEAD. We will have to get back to you on that before next week.

[The information follows:]

The cost of the hardware for the Instrument Landing System stored at Charlotte Airport is $120,000. Regional costs for site preparation, land acquisition, and other engineering tasks is estimated at $702,000, resulting in a total project cost of $822,000.

Mr. MEAD. So far, there are not a lot of examples of this, but I think the reason for that is, as I was suggesting earlier, most of the systems are not out there yet. But we can guarantee that you will see more of this phenomenon unless they get a handle on the information system and on the staffing issue in the field.

FAA WORK FORCES

I would like to turn now to work forces. No question, FAA is clearly making progress in the controller and inspector hiring area. Shortages do persist, as you pointed out. Actually FAA estimates that it will fall about 1,900 people short of its 1990 goal of 12,700 controllers, full performance level controllers. FAA will also fall about 250 people short of the 3,000 inspectors it needs in 1991.

But the actual number of controllers FAA actually needs cannot be determined yet, Mr. Chairman. It is not just the number they need, it is where they need them, and the reason we do not know is because after 3 years, the staffing standards have not been updated. I think this is becoming a very important point. As the numbers get up there, it is not as obvious that there are shortages. We need to know at what facilities there are shortages, and where there are none.

The shortage of inspectors may be understated because FAA staffing standards do not take into consideration the major new inspection requirements of the last 2 years like hands-on inspection of aging aircraft and the foreign aircraft repair station issue.

The shortage of maintenance technicians is severe. It is destined to get worse. At the beginning of fiscal 1990, FAA was about 1,500 people short of the 10,000 technicians it needed. This is a problem that we have been predicting for several years. It is now with us. The reason is that FAA had not been hiring enough maintenance technicians. This is because it thought it would need less of them when the new modernization systems came on line. But because they have not come on line and have been delayed so much, they now have a shortage of people to repair the existing equipment.

At this point rebuilding that work force is going to be quite difficult. We reported some time ago that much of the maintenance work force was within 5 years of retirement. To replace them and increase the total number of technicians FAA will have to hire about 2,300 people by 1994. That is no small undertaking.

Even if FAA is able to hire that many, it takes 3 to 5 years to train them fully. What that says to us, Mr. Chairman, is that while we know contracting out is a very controversial issue on the maintenance, we think FAA has little choice but to contract out, probably around $500 million over the next several years. Somebody has to do this maintenance.

Also, one of the more significant issues on the horizon which could have a major impact on the controller work force is FAA's plan to consolidate its terminal radar approach control facilities. You may recall the experience with the flight service stations and what we went through consolidating those. We think that experience probably will pale in comparison to a consolidation of these larger facilities.

I believe Admiral Busey will tell you next week that he intends to revisit this issue. We believe that to be a wise decision. That could have very profound consequences, though, in terms of cost. You may remember that the original National Airspace System plan cost/benefit justification predicated many of the benefits on consolidations and, therefore, there would be much more controller productivity. The figure that we are hearing is that it may cost about $1 billion more if there is not consolidation on the scale originally envisioned.

As I talk about training for a moment, at the beginning of my statement I pointed out that it is not just a question of hiring the people. The quality of training at FAA is the subject of a major FAA initiative. It was 2 years ago they launched the flight plan for training, $406 million, 6-year training plan. What we are finding is that 30 of the 47 projects are already behind schedule, and the reason the plan is off schedule is because they are trying to do too much all at once with too few dollars.

Also, the academy's capacity to train people is limited. You cannot hire more people than you can train. That is why FAA this year may report to you that they cannot hire the inspectors that are within their goals because they have an enormous backlog of training. They are hiring the new inspectors and they cannot train them and they are on the payroll. Also, there is a limitation on the number of seats at the academy. Although the FAA would like to hire 900 maintenance technicians, they only have 650 seats at the academy.

FAA ADMINISTRATOR RECEPTIVITY TO GAO SUGGESTIONS

I would like to note before I quickly transition to the interstate point is that, as you gracefully suggested in your opening remarks, it is in the nature of GAO to identify improvements that an agency needs to make. That is our job. However, I do not want to obscure the achievements that FAA and its controllers and all have made. I mean, they do an extraordinary job of maintaining and operating the busiest and probably the safest system in the world.

Also, over the last two Administrators, I would say that they have tried diligently to be reasonably responsive to the recommendations we have made. I would just like to close the FAA section on that note.

INTERSTATE HIGHWAYS

A couple of words on the Interstate might be of interest to you. We recognize you face very difficult decisions on how best to spend available dollars to meet enormous highway and bridge needs, and we have underway a substantial body of work that we think will be useful to you over the next couple of years. I would like to call to your attention, though, the Interstate Resurfacing, Restoration, Rehabilitation and Reconstruction Program. They call that the Interstate 4R Program for short. It is really a preservation program for the over $100 billion investment in the Interstate Highway System.

Our concerns are that about 40 percent of the Interstate is in barely tolerable or worse condition. That is not according to us, that is according to the administering agency, and some States are not meeting their maintenance responsibilities because of funding shortfalls at the State level.

Maintenance is not eligible for funding under the current Federal Interstate 4R Program, but certain types of State maintenance activities can extend the life of pavement and reduce or defer the need for Federal funding.

Senator LAUTENBERG. What is the compulsion for States to make those investments? All of these maintenance tasks fall to the States to perform, but the funding ratios are what on this—the 4R?

Mr. MEAD. The 4R is bigtime restoration, such as rehabilitation work, that will generally extend the pavement life for at least 8 years. Federal funds will cover this preservation work, and the funding ratio is 90 percent Federal funds, 10 percent State. Regular maintenance, such as resealing pavement cracks to prevent water from seeping down, is not eligible for Federal funding now.

Senator LAUTENBERG. What is the compulsion for the States to take the necessary steps, other than the fact that the motorists complain?

Mr. MEAD. It may not be that strong. The Federal sanction that is in place, I guess I would characterize it as an atom bomb. It is not something that one would use to say to the State; you did not maintain your roads, therefore you get no money.

Senator LAUTENBERG. In the law?

Mr. MEAD. Yes; but it is rarely, if ever, used. One possibility you might consider is building in not just sticks like that but possibly some carrots as well. Certainly the States have an interest in maintaining the roads. I mean, they want the traveling public to have a pleasant ride. They are stretched fiscally like many of the rest of us, but the program needs to have incentives built into it.

Also, we probably need to consider goals for reducing the 43 percent of Interstate pavement in fair or poor condition. Perhaps if the State improved its road where there was a 5- or 10-percent reduction in fair or poor pavement, that could have a corresponding effect on the level of funding they would get.

Also, there might be some 4R activities that benefit more motorists than other activities that are eligible for funding at the 90/10 ratio level. Focusing on the range of activities that should be eligible for a 90-percent Federal cost share could be quite productive.

Senator LAUTENBERG. Where do you get your information from? You said primarily from the agencies, but how does the calculation develop that 40 percent plus are in either fair or poor condition?

Mr. MEAD. The States make an assessment using FHWA guidelines and a model for estimating future needs that has been developed by FHWA. We reviewed the model a couple of years ago. Mr. Chairman, we found that the model for estimating highway needs is not perfect. No model ever is, but we felt that it did a reasonably good job of reflecting needs.

Senator LAUTENBERG. I'm just curious, while we are on the subject, what is the inducement for a State to 'fess up? Is there any incentive for them, if the funds that are provided for major repairs are modestly shared by the States and there are those that are entirely their cost, is there any reason that you can think of that would suggest that maybe these reports—the development of information is being colored in one way or the other?

Mr. MEAD. No; I think there may be some of that in the bridge area, the identifying of deficient bridges. Specifically, we found instances where bridges were being reported as deficient when there was no road any longer leading to the bridge. That would suggest something along the lines you had in mind.

On the other side, Interstate pavement, at a conceptual level you can see why there might be some incentive to defer maintenance, but it is very difficult to establish that States deliberately do that.

Senator LAUTENBERG. Maybe not deliberately, but because of neglect, omission rather than commission. I mean, if States are so pressed to get their work done on the highway systems as it is, one of the last things you do is send out an inspector to see what the general condition is. I would imagine a lot of those people have their attention focused on immediate problems—you know, cars cannot pass because of an 8-foot hole in the road, or something of that nature.

The reason I press on this is we will be coming up for highway reauthorization in fairly short order. Do you want to say something about this? I wonder if there has ever been a study done on whether or not toll roads are in substantially better repair, or whether it is found that toll roads, even though they have a dedicated source of funding, also run into the same quality problems as they do in the toll-free roads?

Mr. MEAD. Mr. Chairman, this is Yvonne Pufahl. She leads the bulk of our work in the highway area.

Ms. PUFAHL. I am not aware of any such study that you are referring to, but I also want to note that it is very difficult to compare roads. There are so many factors that come into play. For instance, just the weather—the freeze/thaw cycles, and as you know, the Northeast is hit very hard by that. Other factors include the soil, when the roadway was built, and just natural aging. There are just a lot of factors.

Senator LAUTENBERG. But in terms of the quality of information, are you the one that deals with the information that is gathered? Do you have any feel for the quality and reliability of the data?

Ms. PUFAHL. As far as the assessment of fair and poor pavement, there really is not any incentive for bias. It is not connected with Federal funding and the only thing a State would be doing is painting a poor picture of itself.

Senator LAUTENBERG. That is right, exactly. So why does some Governor, or some legislator, want to get out there and say, "Boy, our place really stinks." I mean, have you been out there lately? And tell the citizens who are supposed to vote for them come November or May, whenever they have their elections, "Boy, our roads are really a mess." Do you not think this is unlikely?

Now, this is kind of hip-shooting and I do not like to do it, but it sometimes is fun—are we underestimating? Are we seeing underestimates of the conditions of the roads around the country?

Ms. PUFAHL. It is not underestimating of the conditions. It is probably underestimating of the costs that are needed in the future for the Interstate System, and one of the reasons for that, as Mr. Mead may have noted, is the capacity that is needed on the Interstate.

We have nearly completed the Interstate lengthwise, but now a lot of the 4R funds are targeted to extending its width. Some States are forced to make tradeoffs between maintaining what they already have and expanding the width.

Senator LAUTENBERG. I am sure that the estimates were very far short in terms of volume of traffic. I mean, it is pretty rare around the country that roads are underutilized, and again I draw from my own experience in the Northeast in the New Jersey, New York, Philadelphia area. There is hardly a moment when those highways are not used and repairs are often done at night and off-hours so that everything is not backed up. But I was concerned about the quality of the data.

Thank you.

Ms. PUFAHL. You are welcome.

Mr. MEAD. Here is a statistic that you might find useful to tuck away. The widening issue that Yvonne was alluding to, Congress authorized widening as one of the 4R-eligible activities in 1981, and by 1989, 13 percent of the funding was going to widening. Now, keep in mind that that widening is competing with the preservation activities.

DOT is projecting that in the future, about 50 percent of the 4R funding will be needed for widening.

Senator LAUTENBERG. Thank you very much. It is a discouraging picture to think of widening these highways. Good bye grass and life quality and all those things. We will soon have the biggest piece of pavement among nations in the world, coast to coast, border to border.

AMTRAK NEEDS

Mr. MEAD. Can I say a few words about Amtrak? Today, Federal subsidies cover about 28 percent of Amtrak's $2.2 billion in operating costs. Eight years ago, the subsidy was 52 percent, so that is quite an improvement. The funding situation clearly has improved, but Amtrak still requires assistance for the foreseeable future, which I would define as at least the next 5 years.

The administration's fiscal year 1991 budget request does not reflect that reality as you know. It does not request any funding for Amtrak. As a result, Amtrak exercised its prerogative to submit its annual budget request directly to the Congress. That request includes $495 million in subsidies to cover the operating losses and $188 million for capital assistance.

The capital assistance is mostly in the nature of replacing ancient equipment and improving track.

Despite earlier predictions, Amtrak has not been able to generate enough revenue from its own operations to meet its needs. They had said earlier, that beginning in 1985, income from the Revenue Enhancement Program would cover its capital needs. That Revenue Enhancement Program does not involve carrying passengers. It is providing the sort of side businesses that are collateral to the carriage of passengers, such as doing track welding and real estate transactions.

That program has not been as promising as Amtrak had thought. And we reported——

Senator LAUTENBERG. Why is that?

Mr. MEAD. I think they were overly optimistic in the projects, especially in the real estate area that they thought would materialize.

Senator LAUTENBERG. Is that because they have not been able to get them going, or because they are in place and the response from renters, lessers, et cetera, has not been there?

Mr. MEAD. This is Mr. Kalmar, he works in our rail area.

Mr. KALMAR. Mr. Chairman, the reason that the real estate development projects have not gotten off the ground is because the geographic areas from which they expected to get a great deal of revenue have experienced economic problems, a general downturn in the real estate market. So they just have not been able to get them off the ground at this point in time.

Senator LAUTENBERG. So they have not been able to find tenants that would justify the investment in construction?

Mr. KALMAR. That is correct.

Senator LAUTENBERG. Did you, Mr. Mead, look at Amtrak's request for funding the coming fiscal year?

Mr. MEAD. In a general sense, Mr. Chairman.

Senator LAUTENBERG. In Amtrak's request for capital, they estimate, you say here on the top of page 16, over a 5-year period, 1989 through 1993, needs of about $2.5 billion to cover their projected operating losses, which is fairly close to the target, and $1.2 billion to replace equipment and improve track. That is about $240 million a year.

Mr. MEAD. It does not add up. Is that your point?

Senator LAUTENBERG. Yes.

Mr. MEAD. Yes; it does not add up. And the reason it does not add up is because they are counting on capital assistance from a variety of other sources. For example, in their request this year to the Congress, they would like to issue bonds. They would like to have bonding authority.

And that would generate some revenue. They are also looking to the Revenue Enhancement Program. But we see that in the aggregate of producing about $165 million over the next 5 years. So it is those other sources.

In fact, your question is interesting because as I was going over the statement, the question occurred to me, too; this does not add up. When one does a little probing behind it you realize that Mr. Claytor's projections for a revenue sufficient Amtrak are hinged very directly on the capital investment.

If the capital investments that Amtrak wants to make in new locomotives, replacing their aging equipment, do not materialize, it is almost certain that that will doom revenue sufficiency. They are very closely linked.

Senator LAUTENBERG. I guess in fairness, what happens is that when it is suggested that there be zero funding, it does damper down the requests for adequate funding to do the job, especially in capital infrastructure needs because that is not something that a lot of people around here see. We tend to view things in terms of immediate gratification. And when you get a new piece of equipment, it is pretty obvious. When the chairs maintain their position, do not fall back because they are too old and no longer fixable, that is immediate.

But when you start to see electrification, things of that nature, that is so far off in the future. That could be 4 or 5 years away.

Mr. **Mead**. That is exactly right. And also, I find it interesting, at least academically, that when we issue a new national transportation policy that talks about being sensitive to the integration of the different transportation modes what would happen to the transportation in the Northeast corridor of this country if we did not have Amtrak, given its record over the past few years? As if we have lots more room to put planes in Washington and La Guardia and Boston now.

Senator **Lautenberg**. Please continue.

PREPARED STATEMENT

Mr. **Mead**. That's all I have, Mr. Chairman, and I thank you for hearing us out on the FAA and the highways and Amtrak. I would like to turn now to Ms. Hecker.

[The statement follows:]

Statement of Kenneth M. Meade

Mr. Chairman and Members of the Subcommittee: We appreciate the opportunity to testify on selected aspects of the Department of Transportation's (DOT) fiscal year 1991 budget request. Specifically, we will address issues related to the Federal Aviation Administration (FAA), the Interstate highway program, and Amtrak. In each of the past 3 years, we have reported and testified to the Subcommittee on FAA's efforts to modernize the air traffic control (ATC) system and maintain system safety through its three key work forces—controllers, inspectors, and maintenance technicians. As requested by the Subcommittee, the bulk of our testimony today will focus on these two topics, which together account for 80 percent of FAA's $8.3 billion budget request. We know the Subcommittee also faces important budget decisions on the Interstate component of the highway program and on federal assistance to Amtrak. Consequently, we will provide a brief overview of what our work suggests in these areas as well.

In summary, we found that:

—Developing and installing new ATC systems continue to take longer than FAA expected. Most major systems have experienced another round of delays. Such delays have required the addition of interim projects to upgrade existing systems. Our work to date on the largest of these projects—the Interim Support Plan—suggests that FAA did not properly plan and assess its needs before seeking funding from the Congress.

—FAA has not yet identified the additional human resources necessary to implement ATC modernization projects at field locations. Insufficient staff at field locations to install, test, and be trained on the new equipment will cause further delays in realizing modernization benefits.

—FAA will not meet this year's staffing goals for controllers, inspectors, and maintenance technicians. It expects shortages of about 1,900 experienced controllers, 500 inspectors, and 1,500 maintenance technicians. In addition, FAA's training initiatives are falling behind schedule. FAA may have to curtail its planned hiring because of limited training capacity, further compounding shortages.

—Over 40 percent of the pavement on Interstate highways is in fair or poor condition. In addition, about one-half of future Interstate preservation dollars is estimated to be used for lane widening, which is much more than anticipated when it became an eligible activity in 1981. Given burgeoning demands for rehabilitation and reconstruction funds, federal priorities for use of these funds must be examined.

—Income generated from Amtrak's revenue enhancement activities cannot be reasonably expected, at this point in time, to cover the railroad's operating losses and capital needs.

MODERNIZING AND REBUILDING THE AIR TRAFFIC CONTROL SYSTEM

The major problems that confronted FAA in the eighties are common knowledge. Aging ATC equipment became stressed to the limit by the unforeseen rise in air travel after airline deregulation. Furthermore, in the aftermath of the controller strike, over 11,000 controllers were abruptly fired. FAA's response to the equipment problem was the National Airspace System (NAS) Plan, an ambitious $12 billion, 10-year program. Introduced in 1981, the NAS Plan was envisioned to update and replace obsolete computer, radar, and communication equipment. Modernization was projected to improve safety, reduce airspace congestion, and increase controller productivity. Equally ambitious was the agency's plan to rebuild and train its controller work force. As we begin a new decade, progress is being made. New ATC equipment is being built and more controllers are being hired. However, many of the problems we have reported and testified on in the past are still with us today.

ATC MODERNIZATION PROBLEMS PERSIST

Since 1981, the NAS Plan has undergone several changes. Project delays and the changing nature of air travel, such as airline implementation of the hub and spoke concept, have caused FAA to reconsider what projects will be needed, how much modernization will cost, and when needed projects will be completed. Past delays, ranging from 1 to 4 years, have necessitated the addition of short-term projects needed to keep up with work load demands until longer term solutions can be installed.

At the request of this Subcommittee, we are reviewing one of the largest of these short-term projects, the Interim Support Plan. The Interim Support Plan is a conglomeration of projects directed primarily at resolving maintenance and capacity problems at terminal radar approach control facilities until longer term activities are completed. Our work to date suggests that FAA did not properly plan and assess the Interim Support Plan before it sought funds for the project. The program was included in the budget before the agency's normal review process was complete. Additionally, FAA did not resolve concerns raised by its Systems Engineering and Integration Contractor. For example, the contractor found that 7 of the 10 individual projects were not cost-beneficial. The likelihood of additional short-term initiatives suggests the need for FAA to properly review new projects before funding is requested.

Short-term projects, coupled with others needed to correct original design deficiencies or to meet new requirements, have caused an increase in the estimated cost of ATC modernization. The estimated total cost could reach $27 billion by the year 2000. Furthermore, FAA now acknowledges that modernization will need continuous funding, and not end in 1991 as its preliminary cost benefit analysis for the NAS Plan indicated.

As we reported last week, project delays persist.[1] A comparison of current estimates with those from just 1 year ago shows that 8 of 12 major projects experienced an additional delay of 200 or more days. Vendors are still experiencing hardware and software development problems because systems cannot meet FAA's requirements. As we have reported in the past, such problems could have been minimized.[2] FAA awarded production contracts without the benefit of risk-mitigating information provided by techniques such as operational testing. This was the case for the Mode S communications and surveillance system. As my colleague, Ms. Hecker, will testify, 5 years after contract award, the Mode S vendor has yet to build one device capable of meeting FAA's requirements. The detrimental impact of project delays is clear: projected benefits to the travelling public and to FAA's work force have been postponed.

In past reports and testimonies, we have made recommendations to improve management of ATC modernization. In particular, we have recommended that FAA prioritize its modernization projects and ensure that operational testing be performed independent of system developers. This would provide additional assurance that the system procured can function in FAA's day-to-day ATC environment.

To FAA's credit, it has begun to address our concerns. Acknowledging that the NAS Plan no longer reflects its total ATC modernization needs, the agency recently announced it was developing a more comprehensive program entitled the Capital Investment Plan. This new effort will include the original NAS Plan and other projects needed for adding capacity, satisfying newly-identified requirements, and sustaining existing operations. We believe the new Capital Investment Plan provides FAA with the opportunity to address our recommendation concerning priorities, as well as to consider ways of developing a measurement strategy that can clearly show progress toward meeting established goals.

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[1] Air Traffic Control: Status of FAA's Effort to Modernize the System (GAO/RCED-90-146FS, Apr. 17, 1990).

[2] Air Traffic Control: Continued Improvements Needed in FAA's Management of the NAS Plan (GAO/RCED-89-7, Nov. 10, 1988).

This is an important point. Since the new plan would differentiate between projects with the ability to sustain the existing system and those needed to raise capacity, the Congress would be in a better position to weigh trade-offs between short-term and long-term activities and investments. An additional encouraging step is the recent designation of an Executive Director for Acquisition and his role in ensuring that independent operational testing is performed in the future.

An emerging issue in modernization that bears attention is FAA's increasing use of support contractors. FAA recently awarded a contract to TRW Incorporated to assist with its automation effort. Some of the types of tasks TRW will perform, such as testing and evaluation, parallel tasks in the contract of Martin Marietta, FAA's Systems Engineering and Integration Contractor. Specifically, we are concerned about how additional players will affect Martin Marietta's overall role in integrating all modernization projects. FAA officials told us they are reviewing the use of support contractors. As part of this assessment, defining precise roles would help to avoid overlapping responsibilities and unnecessary costs. Furthermore, as we recently testified, developing in-house systems engineering expertise is an option that deserves serious consideration in light of the ongoing nature of modernization.[3]

FIELD IMPLEMENTATION STAFF NEEDS STILL UNKNOWN

Field implementation is another major modernization issue that needs further attention. FAA still does not have a handle on the number of staff needed to install and test the new equipment and train controllers in its operation, nor has the agency provided regions with an accurate information system for planning such activities. FAA has not completed its assessment of human resource needs to bring modernization equipment on line. It has a draft study that estimates its needs at one group of facilities, Air Route Traffic Control Centers. While this study is still in draft form, it does suggest substantial shortfalls of air traffic controllers, engineers, and technicians—over 700 staff years in fiscal year 1991 and steadily increasing to over 1,900 staff years in fiscal year 1995. Until FAA estimates and takes action to meet its total field resource needs to implement ATC modernization systems, the credibility of existing project schedules is highly questionable.

Last year, we also reported on the inadequacy of FAA's information system, which caused regions to have difficulty being ready to receive new equipment because of inaccurate equipment delivery dates.[4] Although FAA is developing a new information system, the initiative is behind schedule and may not be complete for another 6 months.

The need for such accurate planning information cannot be overemphasized, as evidenced by a situation concerning installation of a new instrument landing system at the Charlotte Airport. Regional officials delayed contracting for site preparation for the new equipment because they believed the information system did not accurately portray the actual status of the vendor's equipment delivery plans. Indeed, although the vendor was 17 months behind schedule, the information system listed equipment delivery as occurring in January 1990. However, without telling the region, FAA purchased some equipment through other means and some equipment was delivered to the Charlotte airport in February 1990. Since the site was not prepared to receive the equipment, it has to be stored on-site. FAA plans to complete installation in late June 1990.

WORK FORCE STAFFING AND TRAINING PROBLEMS

Although FAA is making progress, controller and inspector staffing shortages persist. Last January, FAA estimated it would fall about 1,900 people short of its 1990 goal of 12,725 full performance controllers and that it would not meet its overall congressional controller mandate. FAA's 1991 inspector work force will be about 250 short of about 3,000 needed. Both of these estimates may be off target, however. The number of controllers FAA actually needs cannot be determined because, after 3 years, staffing standards are still being updated. Additionally, the inspector shortage may be greater because FAA's staffing standards understate the number needed for major new inspection requirements.

FAA's maintenance technician shortage is severe and probably will get worse. At the beginning of fiscal year 1990, FAA was about 1,500 short of the 10,000 technicians it needed. Reaching this level will be difficult. First, as we had reported, much of the maintenance work force is within 5 years of retirement age, so the shortage is likely to worsen.[5] Second, even if FAA is able to hire the over 2,300 technicians it says are needed by 1994, some time will pass before they are fully experienced because 3 to 5 years are needed for new hires to reach full performance level.

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[3] Issues Related to FAA's Modernization of the Air Traffic Control System (GAO/T-RCED-90-32, Feb. 27, 1990).

[4] Air Traffic Control: FAA's Implementation of Modernization Projects in the Field (GAO/RCED-89-92, June 28, 1989).

As part of its plan to overcome staffing shortages, FAA began paying controllers, inspectors, and maintenance technicians an incentive allowance of up to 20 percent in June 1989 to attract people to hard-to-staff facilities in the Los Angeles, Oakland, Chicago, and New York areas. FAA has paid about $15 million in incentive allowances through March 1990. While the overall number of employees has slightly increased at participating facilities, results so far are mixed. For example, of the 9 participating ATC facilities, only 4 have shown an increase in the number of experienced controllers.

We believe one of the most significant issues on the horizon, which could have a major impact on the controller work force, involves plans to consolidate 188 terminal radar approach facilities into at least 23 area control facilities. We are pleased that the FAA Administrator plans to revisit this issue. Facility consolidation and integration of technology not only involves funding considerations but also the potential of affecting controller work force size, training requirements, and morale. Consequently, FAA needs to thoroughly consider these matters in its decision-making process.

Complicating its staffing problems, FAA is falling short in its training efforts. For example, FAA may not hire all of the 300 inspectors it intends to bring on board this year because of its inability to train them. Part of the problem is that the FAA Academy in Oklahoma City does not have enough inspector instructors. The demand for training newly hired maintenance technicians will also outstrip the Academy's capacity in 1991 and 1992 when hiring plans call for about 900 new technicians. The Academy can accommodate only 640 new hires each year. Training air traffic controllers may also be a problem. Last year, in surveying the controllers, we found that they were concerned with the quality of training provided to developmental controllers.[6] Training areas that controllers characterized as inadequate included using back-up systems, controlling traffic in bad weather, and knowing emergency procedures. In response to our findings, FAA directed its facility managers to develop corrective action plans. FAA headquarters recently received these plans from its regions, and we intend to review FAA's actions.

FAA has recognized its training deficiencies. To address them, FAA established an Office of Training and Higher Education and developed a comprehensive, $406 million, 6-year training plan. However, 30 of its 47 projects are already behind schedule. We believe the plan is off track because FAA is trying to do too much with the dollars allocated. This suggests the need to establish priorities, something the agency has not done.

I will now provide observations from our work in highways.

HIGHWAY AND BRIDGE NEEDS

As the Congress deliberates the reauthorization of federal-aid highway programs, it will face difficult decisions on how to best spend available federal dollars to meet enormous highway and bridge needs. In its 1989 biennial report to the Congress, DOT estimated that between $25 billion and $39 billion would be needed each year to (1) maintain the entire federal-aid highway system—including Interstate, primary, and secondary roads—through the year 2005 and (2) meet backlogged and accruing bridge replacement and rehabilitation needs. The administration's fiscal year 1991 budget estimates that the federal government will invest $13.2 billion. We currently have underway a substantial amount of work that will provide the Congress with insights on highway funding mechanisms and program delivery options.

Today, we want to call to the Subcommittee's attention the need to better ensure that Interstate Resurfacing, Restoration, Rehabilitation, and Reconstruction (4R) funds will be used to preserve the over $100 billion federal investment in the Interstate system. Although the Interstate represents only 1 percent of all roads, it has assumed a vital role in the nation's transportation network, carrying slightly more than 20 percent of vehicle traffic. Therefore, preservation of the federal investment in the Interstate must be ensured.

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[5] FAA Staffing: Challenges in Managing Shortages in the Maintenance Work Force (GAO/RCED-87-137, Sept. 25, 1987).

[6] Aviation Safety: Serious Problems Continue to Trouble the Air Traffic Control Work Force (GAO/RCED-89-112, Apr. 21, 1989).

Our concerns are that over 40 percent of the Interstate is in barely tolerable or worse condition, and some states are not meeting their maintenance responsibilities because of inadequate funding. Although not eligible for 4R funding, certain types of state maintenance activities can extend the life of pavement and reduce or defer federal 4R funding. Further, DOT projects that about 50 percent of the annual federal Interstate preservation funding will be used for Interstate widening activities. This is a significant increase over the historical share of the 4R funding devoted to widening—only 1 percent in fiscal year 1981 and 13 percent in fiscal year 1989.

Currently, the federal government pays for Interstate preservation activities that extend pavement life, but does not pay for routine maintenance activities such as sealing pavement cracks and joints. These activities, which are states' responsibilities, can also extend the life of pavements by slowing deterioration. Maintenance has been shown to be cost-effective, and can defer capital-intensive types of preservation activities funded by the federal government.

Our work indicates that states' progress in maintaining the Interstate has been mixed. Some states are not performing adequate Interstate maintenance because of insufficient funding. For example, in Louisiana, because of inadequate maintenance, the Federal Highway Administration suspended approvals of certain project agreements and authorizations. Responding to the threatened cutoff of funds, the state took steps to increase its funding of maintenance. In addition, while California has been able to meet its maintenance needs, its future ability to do so may be jeopardized by rising maintenance costs.

According to DOT's biennial report to the Congress, funding requirements for the 4R program significantly exceed the current funding level of $2.8 billion per year. DOT estimates that the Interstate preservation program will need federal and state funds totalling $4.7 billion to $6.1 billion annually through the year 2005. If the federal cost-share remains at 90 percent, the required annual federal investment will be between $4.2 billion and $5.5 billion per year.

In 1981, the scope of the Interstate 4R program was significantly broadened to allow funding for reconstruction, including lane widening. Although major lane widening was not initially expected to be a major component of the 4R program, states have increasingly used 4R funds to widen the Interstate in response to worsening congestion. If this trend continues, the 4R program will change from primarily a pavement preservation program to one that includes a large widening element. About 50 percent of DOT's estimate for the Interstate preservation program will be used for widening. The other half would go primarily to preserve existing pavement.

In light of the significant level of pavement deterioration and some states' inability to adequately fund maintenance, program modifications are needed to ensure that federal dollars are more effectively targeted to activities that extend and preserve the life of the Interstate system. Therefore, as the Congress deliberates the future of federal-aid highway programs, it may wish to consider targeting funding to encourage states to address maintenance activities directed at preserving the Interstate. One option might include varying the federal cost share to emphasize the importance of preservation activities.[7]

Now let us turn to Amtrak.

REALITIES OF AMTRAK'S FINANCIAL NEEDS

The National Railroad Passenger Corporation—commonly known as Amtrak—will need continued federal support to sustain its present passenger train operations for the foreseeable future. This is so despite Amtrak's steadily decreasing need for federal subsidies. Today, federal subsidies cover about 28 percent of Amtrak's $2.2 billion in operating costs; 8 years ago the subsidy was 52 percent. Although the funding situation has improved, Amtrak still requires assistance.

The Administration's fiscal year 1991 budget request does not reflect this reality; it does not request any funding for Amtrak. As a result, Amtrak has submitted its annual budget request directly to the Congress. This request includes $495 million in subsidies to cover operating losses and $188 million for capital assistance in fiscal year 1991. Furthermore, Amtrak estimates that in the 5-year period from 1989 to 1993, it will need about $2.5 billion to cover its projected operating losses and $1.2 billion to replace aging equipment and improve track. Amtrak is considering federal, state, private, and internal sources to fulfill these needs.

Despite earlier predictions, Amtrak has not been able to generate enough revenues from its own operations to meet its needs. Amtrak officials had said earlier that beginning in 1985, income from the Revenue Enhancement Program would cover its capital needs. Revenues for this program are generated through activities such as track welding for commuter railroads and real estate projects. We recently reported that Amtrak earned a total of $140.9 million between 1984 and 1988 from its Revenue Enhancement Program.[8] This income—which is approximately $28 million per year—did not substantially contribute to reducing Amtrak's federal subsidy of $3 billion during that period, although it provided about 38 percent of its capital needs. The program is expected to generate about $165.2 million in income during the next 5 years. This will fall far short of covering Amtrak's operating losses and capital needs.

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[7] Preserving the Interstate System (GAO/T-RCED-90-68, Apr. 24, 1990).

The cost of meeting transportation needs is staggering and is certain to exceed the level of federal funding being programmed. The administration is cognizant of that fact and has proposed a major shift of the burden to pay for such needs to the states and localities, especially in the surface transportation and airport areas. However, in light of continuing budget constraints, there is an urgent need to ensure that federal transportation dollars are well spent. We believe establishing goals and priorities can help in that regard. This would allow better understanding of DOT's tradeoffs of enhancing safety, preserving investments and expanding capacity before costly projects are undertaken. On several occasions, we have recommended this strategy for FAA's air traffic modernization program. In our opinion, other major investment decisions in transportation, such as how to balance pavement preservation with widening of Interstate highways, and how rail service should be improved, would benefit from setting goals and priorities.

Mr. Chairman, this concludes my prepared statement. I would be glad to answer any questions you or Subcommittee members may have at this time.

STATEMENT OF JAYETTA HECKER

Senator LAUTENBERG. I am sorry we kept Mr. Mead going so long, Ms. Hecker. It has the same effect as short funding one phase of transportation over another. It squeezes the remaining one. We do not intend to do that too much, but whatever you can do by way of summarizing your testimony, the chairman will try not to interrupt. I took advantage of the absence of colleagues here, and we, therefore, had some direct exchange, but we do want to move it along. We welcome you and await your testimony.

Ms. HECKER. Thank you, Mr. Chairman.

In addition to my team of Mr. Willemssen and Dr. Stillman, I'd like to introduce the staff that has worked in this area, including our senior technical advisor, Sue Maciorowski, and Andrea Leopold, Ted Alves, Marcia Washington, and John Finedore.

We are pleased to be here to discuss our review of FAA's efforts to modernize and upgrade its automated systems. During the past year, we reviewed three major systems that I will report on today. One is the Mode S, a new radar system; another is AAS, which is the centerpiece of the NAS plan; and a third is CORN, which is a major general purpose procurement.

Our review of these systems revealed fundamental weaknesses in FAA's acquisition of major automated systems. These weaknesses have resulted in further delays in delivering important components of air traffic control modernization, increased risk that existing air traffic control systems will be stressed beyond their capacities and, finally, inadequately justified and costly procurements.

MODE S RADAR SYSTEM

The first system I will talk about is Mode S, or Mode Select, which is a project where lack of adequate management, oversight, and action has resulted in delayed delivery of important air traffic control components.

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[8] Amtrak: Limited Income From the Revenue Enhancement Program (GAO/RCED-90-76, Feb. 1, 1990).

Mode S is a surveillance and communication system that is being developed to provide more accurate aircraft location information by replacing some existing radars, and to allow controllers and pilots to exchange data. Twenty years after FAA developed this concept and over 5 years after awarding a production contract for 137 systems, the agency has spent more than half of the contract ceiling without receiving the first workable system.

This occurred largely because FAA used a high-risk acquisition strategy, failing to adequately develop or test the system before awarding the production contract. In addition, FAA has not managed the contract well. Although officials knew of technical problems as early as February 1987, they did not take the needed action to correct them until June 1989, when they warned the contractor that if contract deficiencies were not resolved, the contract might be terminated.

Since then, while FAA and the contractor were attempting to negotiate changes, an additional 1-year delay occurred. The contracting officer also stopped making payments until the contractor reported some progress.

As a result of these continuing problems, our draft report on this system, sent to the Secretary April 11, recommended that the Secretary evaluate independently the economic, operational, and technical risks involved in completing the contract and consider all alternatives available to the government, including termination of the contract.

On April 17, 6 days after receiving our draft report, FAA and the contractor agreed to a modification of the contract with the following terms: The delivery schedule was extended, the contractor was allowed to deploy less capable interim systems, the Government agreed to delivery of a fully capable system 5 years later than originally planned, and FAA resumed progress payments to the contractor. While FAA's poor management of this contract has left them few good options, it remains uncertain whether FAA's approach is the most effective way to deal with this situation.

In spite of the serious problems in even getting a workable first system, FAA has formally amended the NAS plan to spend over $1 billion to buy 259 more Mode S systems. This decision is unjustified for several reasons: FAA did not properly analyze requirements, did not adequately consider alternatives, and did not evaluate the benefits and costs of this amendment to the NAS plan.

We are recommending that the Secretary direct the FAA Administrator to cancel plans to acquire the additional Mode S systems and provide a thorough analysis of requirements, alternatives, benefits, and costs.

ADVANCED AUTOMATION SYSTEM

The second system I am discussing is the AAS or advanced automation system. It is a $5 billion system and yet another project where FAA is encountering delays in the delivery of critical components of the air traffic control modernization effort. We are concerned that these delays have the potential for affecting FAA's ability to handle safely the predicted increases in air traffic into the next century.

AAS, as you know, is scheduled to replace aging air traffic control computer systems with new hardware, software, and controller work stations. During the design phase of AAS, FAA added new requirements, the schedule was delayed a year, contract costs doubled until capped, and key design elements were deferred until the acquisition phase.

In 1988, FAA awarded a contract to IBM to complete the design and production of AAS. Less than 1 year after the contractor began work, FAA and IBM jointly announced a 13-month delay in the scheduled delivery——

Senator LAUTENBERG. When did they announce that? It had to be fairly recently.

Ms. HECKER. Yes; the initial delay was announced in July 1989.

Senator LAUTENBERG. They announced?

Ms. HECKER. Less than a year after the contractor had begun work, a delay was announced that turned out to be 13 months in length.

Senator LAUTENBERG. When was the contract given out initially? In 1988 FAA awarded a contract to complete the design and production of AAS?

Ms. HECKER. Correct, the contract was awarded in July 1988, and then there was a protest which led to a 4-month delay——

Senator LAUTENBERG. When did they admit or suggest that it was going to be delayed?

Ms. HECKER. In July 1989.

Senator LAUTENBERG. So, it was 1 year after the contract was awarded they then said that there would be a 13-month delay which gets us now to about October, September-October of 1990, is that correct?

Ms. HECKER. The delay was in the delivery——

Senator LAUTENBERG. The delay was not in the completion——

Ms. HECKER. Of the first phase. And, in fact, as I go on, there are even more delays that they are now negotiating and we are projecting even further delays.

Senator LAUTENBERG. So, the 13-month—and the reason I press this is I just recently had a discussion about that. The 13-month delay is a delay in the design and production, or is it the delay in estimating what the total costs would be, et cetera? Explain that to me please.

Ms. HECKER. The delay was for the delivery of the first phase of the AAS, which is primarily the new work stations for controllers at en route centers.

Senator LAUTENBERG. When were they due initially?

Ms. HECKER. They were originally due in 1994 and now they are projected for 1995.

Senator LAUTENBERG. So how much reliance might we put on the fact that this is the last delay?

Ms. HECKER. You can take as a certainty that it is not the last delay.

Senator LAUTENBERG. I would believe that just based on past experience.

And do you say here why that delay?

Ms. HECKER. Yes; that goes back to the issue that there was a design competition phase which was over cost and over budget and FAA then did not resolve all requirements issues and design activities during that design phase. They deferred the unresolved requirements and design activities to the acquisition phase and never changed the schedule for the acquisition phase to account for this. That is really the major factor that led to a very unrealistic software development schedule.

FAA knew the schedule was unrealistic but demanded it from the bidders. The bidders also knew it was unrealistic, but bid it because otherwise they would not be considered. Therefore, everyone went into the bidding for this massive contract with an unrealistic schedule in front of them, and that was why they now have agreed to the 13-month delay. Both FAA and IBM agree that they are looking at additional delays that they will be announcing later this year. We are not sure that will be the last delay you will see because there are still open requirements and FAA is still adding new requirements.

Senator LAUTENBERG. So that any contractor is somewhat absolved from the responsibility for the delay. I mean, we keep making changes. Also, in terms of the costs. Now, the contractor is in the enviable position of saying it is all your fault. Whatever I have to do, you have to pay for. We are not accusing them of any skullduggery here. We are saying that as a result of the process, they are free of most of the blame for the extension in time and the increase in the costs of the contract.

Mr. WILLEMSSEN. Mr. Chairman, I would say it is mixed. On the new requirements, you can point the finger at FAA. In other cases, however, there were some existing requirements that the contractor did not thoroughly analyze. Further, the stringent performance requirements of the system require a great deal of time to meet. For example, the requirement that the downtime for the AAS be 3 to 4 seconds per year is a difficult requirement to meet.

Ms. HECKER. We believe the delay in the first phase will probably be greater than announced and, as a consequence the first segment is likely to lead to delays in future phases of AAS, the most critical of which is the plan to upgrade terminal automation systems. The first phase is for replacement of controllers work stations at the en route centers. Subsequent phases, which are dependent on the successful completion of the first phase will, therefore, likely be delayed.

This increased delay increases the likelihood that FAA will be forced to operate its current aging systems through the 1990's. As we reported to you last year and worked on at your specific request, many of these systems have been experiencing serious capacity shortfalls. Indeed, we reported that almost 70 percent of the large, busy terminal radar approach control facilities, known as TRACON's, reported that they had experienced one of three problems: Aircraft information disappearing from controllers' screens, flickering displays—the information going off and on, or delayed computer responses to controllers' attempts to update or request data.

These overload problems threaten the ability of controllers to maintain safe separation of aircraft. To address this dilemma, last year we recommended that the Secretary of Transportation direct FAA to institute a computer capacity and performance management program and investigate alternatives for meeting the larger TRACON needs through the next 10 years. Since our report FAA has initiated some steps to remedy the immediate capacity deficiencies.

However, regarding the need to explore alternatives, the Department responded that they believed the FAA had already developed an appropriate interim solution in 1987; that is, the ISP or interim support plan for the TRACON's. This interim support plan is not encouraging. It calls for increasing the capacity of the present systems in the larger TRACON's by pursuing sole source contracts to expand current system configurations to the maximum design limits. This expansion will require FAA to buy 1960's vintage computers similar to the existing processors.

Senator LAUTENBERG. What kind of computers?

Mr. WILLEMSSEN. Univac 8303's.

Senator LAUTENBERG. I understand.

Ms. HECKER. So, as you know, these are very antiquated processors which have less processing capability than a desktop computer that you can purchase.

Senator LAUTENBERG. Excuse me. The Univac is not around anymore, is it?

Mr. WILLEMSSEN. They are part of Unisys.

Senator LAUTENBERG. Are they still making that kind of equipment? I saw 1401 equipment. We used to give that stuff away if we could find someone who was willing to take it and pay the maintenance costs.

Ms. HECKER. FAA will.

Senator LAUTENBERG. FAA will take it. What are they doing?

Mr. WILLEMSSEN. They are still planning to produce more. The assembly language software for these systems can only be operated on the old processors. Because FAA does not want to undergo another software development effort, they have to keep buying the old machines.

Senator LAUTENBERG. So, they are manufacturing 1960's machines?

Mr. WILLEMSSEN. The production line will have to be reopened. It has been off and on for the last 20 years.

Senator LAUTENBERG. This is almost impossible. I mean, the mistakes——

Mr. WILLEMSSEN. This is what we were concerned about in our report last summer. Given the continued slip in the advanced automation system, you are looking at continuing to operate these aging systems for another 10, maybe 15 years. FAA's plan is to continue to upgrade with these old processors as opposed to looking at other alternatives that may indeed involve development, but in the long run may be less risky.

Senator LAUTENBERG. It is a discouraging picture. Please continue.

Ms. HECKER. As you can see, given the delay in AAS and the clear inadequacies of the existing systems, we believe FAA is assuming a risk that its systems will not be able to handle the increasing air traffic through the 1990's. To prevent this potential threat to air traffic safety and reduce the possible need to take drastic action in the future such as limiting the number of aircraft, we reiterate our recommendation that FAA immediately identify other alternatives for meeting the larger TRACON's air traffic control requirements through the 1990's.

FAA'S COMPUTER RESOURCES NUCLEUS [CORN] PROJECT

The third area I want to describe to you briefly is the CORN project or computer resources nucleus. This is a $1.5 billion project which we believe is an example of an inadequately justified general-purpose procurement. With CORN, FAA intends to have a contractor provide and operate computer facilities for the Agency's general-purpose data processing functions such as payroll and personnel.

FAA anticipates that the CORN contract will be awarded within the next few months. While FAA's concept to contract out its general-purpose functions may be acceptable, the CORN procurement is not adequately justified and, therefore, we are recommending in a draft report that the contract not be awarded.

Our recommendation is based on several serious concerns. One is that while FAA in large part based its justification for CORN on an assertion that insufficient computer capacity was causing poor response times, project officials could not support this assertion. Moreover, we did our own analysis of the limited data available, and it did not show any evidence of insufficient computer capacity causing poor response times. So, we are very concerned that after investing hundreds of millions of dollars in both converting the current systems and procuring more computer capacity through CORN, FAA could still end up with poor response times.

A second concern is that we found FAA could not substantiate its claim that its general-purpose data processing needs would increase by 30 percent each year for 10 years, ultimately requiring a system about 1,300 percent larger than the current one. This is equivalent to saying that in 10 years a system will be needed that can produce 15 million printed pages per day 365 days a year.

A third concern we have is that there are major unresolved problems and uncertainty that could increase the cost of CORN. We found FAA's methodology for validating bidders' proposals is flawed, and FAA's estimate of $75 million for converting applications to CORN is unreliable.

Finally, we think it is important to note that the CORN project itself would not improve the quality of FAA's information. The contractor would be required only to move current applications and data bases to the new system. The contractor would not be required to enhance applications, improve their performance, or eliminate any existing deficiencies. Thus, even though the CORN approach for contracting services may have merit, we find FAA's justification and planning for this effort has been inadequate.

In summary, Mr. Chairman, we believe that FAA's acquisition management suffers from substantial weaknesses, weaknesses that have resulted in continued delays, increased risk, and expensive and inadequately justified procurements.

We are concerned that until FAA gets its acquisition house in order and breaks this trend of unjustified, costly, and delayed procurements, the American public cannot be assured that its money is being well spent and that its continued safety is being ensured.

PREPARED STATEMENT

This concludes my remarks. I would be pleased to answer any questions you may have.

[The statement follows:]

STATEMENT OF JAYETTA HECKER

Mr. Chairman and Members of the Subcommittee: We are pleased to be here to discuss the Federal Aviation Administration's (FAA) efforts to modernize and upgrade its automated systems. During the past year our reviews of two air traffic control modernization projects and a planned general purpose procurement have uncovered consistent, fundamental weaknesses in FAA's acquisition of major automated systems. These weaknesses have contributed to further delays in delivering important components for air traffic control modernization, increased risk that existing air traffic control systems will be stressed beyond their capacities, and inadequately justified and costly procurements.

Mode Select, or Mode S, is a project where lack of adequate management oversight and action has resulted in the delayed delivery of important air traffic control system components. Mode S is an air traffic control surveillance and communication system that is being developed to provide more accurate aircraft location information by replacing some existing radars, and to allow controllers and pilots to exchange data, such as weather information. Fifteen years after initiating the Mode S concept, FAA awarded a production contract in 1984 to a Westinghouse and UNISYS joint venture to buy 137 Mode S systems.

Over 5 years after FAA awarded the contract for the initial 137 systems, the agency has spent about $145 million of the $271 million contract ceiling price without receiving the first system. This occurred because FAA used a high-risk acquisition strategy and did not remedy contract problems when they arose. In acquiring Mode S, FAA did not adequately develop or test the system before awarding the production contract, which contributed to later technical problems.

Further, although officials knew of technical problems as early as February 1987, FAA did not take needed action to correct them until June 1989, when it warned the contractor that if contract deficiencies were not resolved, the contract might be terminated. From June 1989 to April 1990, FAA and the contractor were unable to agree on an approach to overcome the contract problems. In early 1990, as FAA was attempting to negotiate contract changes, an additional 1-year delay occurred and the contracting officer stopped paying the contractor until progress was made.

As a result of these continuing problems, our draft Mode S report, sent to the Secretary of Transportation on April 11, 1990, recommended that the Secretary independently evaluate the economic, operational, and technical risks involved in completing the contract, considering all alternatives available to the government—including terminating the contract in whole or in part. However, on April 17, 1990, FAA and the contractor agreed to extend the delivery schedule and allow the deployment of less capable, interim systems before the delivery of fully capable ones. Delivery of the first fully capable system is now scheduled for April 1993, 5 years later than originally planned. Moreover, FAA resumed paying the contractor. This action negates the benefit of evaluating contract alternatives at this time, but FAA has agreed to evaluate the technical and operational risks involved in completing the program. Currently, it remains uncertain whether FAA's approach to allow interim deployments is the most effective way to deal with the problems.

Even though it had not yet received the first system, FAA decided in October 1988 to spend over a billion dollars to buy 259 more, bringing the total estimated cost of all 396 systems to $1.7 billion. This decision was unjustified. In making this decision, FAA did not properly analyze requirements, did not adequately consider alternatives, and did not evaluate benefits and costs. Our draft report therefore recommended that the Secretary direct the FAA Administrator to cancel plans to acquire additional Mode S systems, and to perform a thorough analysis of requirements, alternatives, benefits, and costs. Agency officials have agreed to conduct a complete analysis before awarding a contract for these additional systems. However, officials stated that they do not intend to cancel existing plans to acquire additional Mode S systems. We continue to believe that the Secretary should direct the FAA Administrator to rescind the requirement for additional Mode S systems and to perform a thorough analysis of requirements, alternatives, benefits, and costs.

The Advanced Automation System, or AAS, is yet another project where FAA is encountering delays in the delivery of critical components for the air traffic control modernization effort. These delays have the potential for affecting FAA's ability to handle safely the predicted increases in air traffic into the next century.

AAS is scheduled to replace aging air traffic control computer systems with new hardware, software, and controller workstations. Improvements are expected to result primarily from (1) using modern equipment and (2) developing new software functions intended to automate some controller functions and allow more aircraft to fly user-preferred, fuel-efficient routes. FAA awarded competitive contracts to design AAS to International Business Machines (IBM) Corporation and Hughes Aircraft Company in 1984. During this design competition phase, new requirements were added, contract costs doubled, and the schedule was delayed a year. In 1988, FAA awarded a contract to IBM to complete the design and production of AAS. The cost of AAS is estimated at over $5 billion, making it the most expensive program in the National Airspace System Plan.

Less than a year after the contractor began work on the contract, FAA and IBM jointly identified a 13-month delay in the scheduled delivery of the first major segment of three project increments, called the Initial Sector Suite System. The primary causes of this delay were an overly ambitious software development schedule and FAA's and the contractor's inability to resolve key requirements issues, such as processing flight plan data and displaying aeronautical charts. The eventual delay in ISSS will probably be greater than announced because some requirements issues are still unresolved, and FAA has identified other new requirements.

As a consequence of the delay in the first segment, the potential exists that later phases of AAS to upgrade terminal automation systems will also be delayed. This increases the likelihood that FAA will be forced to operate its current aging systems through the 1990s and further delay benefits. As we reported to you last year, Mr. Chairman, many of these current systems have experienced capacity shortfalls.[1] Indeed, almost 70 percent of the large, busy terminal radar approach control facilities, known as TRACONs, reported to us that they had experienced aircraft information disappearing from controllers' screens, flickering displays, or delayed computer responses to controllers' attempts to update or request data. These overload problems threaten the ability of controllers to maintain safe separation of aircraft.

To address this dilemma, last year we recommended that the Secretary of Transportation direct FAA to institute a computer capacity and performance management program to monitor work loads and system utilization in all facilities, and investigate alternatives for meeting the larger TRACONs' air traffic control requirements for at least the next 10 years. Since our report, FAA has initiated some steps to remedy immediate capacity deficiencies.

However, regarding the need to explore alternatives, the Department of Transportation believed that FAA had already developed an appropriate interim solution in 1987 to meet TRACON requirements for the next 10 years. This interim solution is not encouraging. It calls for increasing the capacity of the present systems in larger TRACONs by pursuing sole-source contracts to expand current system configurations to their maximum design limits. This expansion will require FAA to buy 1960s-vintage computers similar to existing processors. These antiquated processors have less processing capability than a desktop computer that can be purchased in a local store.

Given the potential further delay in AAS and the clear inadequacies of the existing computer systems in large TRACONs, FAA is assuming the risk that its systems will not be able to handle the increasing air traffic of the 1990s. To prevent this potential threat to air traffic safety and reduce the possible need to take drastic actions in the future, such as limiting the number of aircraft, we reiterate our recommendation that FAA immediately identify other alternatives for meeting the larger TRACONs' air traffic control requirements through the 1990s.

FAA's Computer Resources Nucleus (CORN) project is another example of an inadequately justified general-purpose procurement. With CORN, FAA intends to have a contractor provide and operate computer facilities for the agency's general-purpose data-processing functions such as payroll, personnel, and aviation safety information systems for the next 10 years. The total estimated cost for the 10 years is about $1.5 billion, a tenfold increase since the project was first proposed in 1986. FAA anticipates that the CORN contract will be awarded within the next few months.

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[1] Air Traffic Control: Computer Capacity Shortfalls May Impair Flight Safety (GAO/IMTEC-89-63, July 6, 1989).

While FAA's concept to contract out its general-purpose functions may be acceptable, the CORN procurement is not adequately justified and therefore, we are recommending in a draft report that a contract not be awarded.

FAA has identified a number of reasons to justify procuring CORN. One is insufficient computer capacity causing poor response times in the current system. However, project officials could not support this assertion, primarily because FAA does not perform needed capacity management and planning that would provide data on computer capacity and explain why users are apparently experiencing slow response times. Our own analysis of the limited data available does not show evidence of insufficient computer capacity causing poor response times. Other problems may be the source of the perceived poor response times, such as inefficient software or communications, which are not subject to change under CORN. This means that after investing hundreds of millions of dollars in procuring more computer capacity through CORN, FAA may still end up with poor response times.

A second reason for procuring CORN is FAA's claim that its general-purpose data-processing needs will increase by 30 percent each year for 10 years, ultimately requiring a system about 1300 percent larger than the current one. This is equivalent to saying that in 10 years a system will be needed that can produce about 15 million printed pages per day, 365 days per year. This projection is based on sparse data with little identification of what dramatic changes will occur in FAA's missions to warrant this steep growth in later years.

Other major unresolved problems and uncertainties could increase the cost of CORN. In particular, FAA's method for validating bidders' proposed solutions is deficient because information that FAA provided to vendors to aid them in developing their proposals was incomplete. Further, the extremely small sample work load that FAA developed for validating proposals is unrepresentative of the agency's total work load. This flawed methodology will not provide adequate data for accurately evaluating vendors' proposals and their proposed charges for data-processing services. This deficiency could have cost ramifications throughout the life of the contract.

FAA's cost estimate of $74.5 million for converting current applications to CORN is unreliable. FAA estimates the cost to convert the 15 million lines of existing software at about $5 to $6 per line of code, while industry estimates are usually $15 to $20 per line of code or higher. Also, since generating the cost estimate, FAA has increased the amount of conversion work to be performed by the contractor and has doubled the amount of time needed to do this without correspondingly increasing the cost estimate. The estimate is based on unvalidated assumptions about the availability of FAA staff to assist the contractor in the conversion.

In addition, CORN will not improve the quality of information. Under CORN, the contractor will be required only to move current applications and data bases to the new system. The contractor will not be required to enhance the applications, improve their performance, or eliminate existing deficiencies. Therefore, existing problems with FAA's applications and data bases would simply be transferred to CORN, at considerable expense.

In summary, while the CORN approach may have merit, FAA's justification and planning for this effort has been inadequate. Before it spends hundreds of millions of dollars to move to a new system that neither guarantees a remedy for existing deficiencies nor improves current information, FAA should first identify the causes of perceived problems with current system performance.

Overall, Mr. Chairman, FAA's acquisition management suffers from fundamental weaknesses that have resulted in continued delays in the development and delivery of important elements of air traffic control modernization, increased risk that some existing air traffic control systems will be stressed beyond their capacities, and expensive and inadequately justified procurements. Implementation of the National Airspace System Plan is a formidable task. To develop and acquire so many large, complex systems would challenge the abilities of any organization. To do the best job possible, FAA must elevate the importance of acquisition management within the agency. It must improve its acquisition management and ensure that acquisition has the visibility and involvement of top management within the organization. We understand that FAA has recently instituted a reorganization to give acquisition increased emphasis. This is a positive beginning. However, reorganization must be accompanied by adequate program management policies and practices. Until FAA gets its acquisition house in order and breaks the trend of unjustified, costly, and delayed procurements, the American public cannot be assured that its money is being well spent and that its continued air safety is ensured.

Mr. Chairman, this concludes my prepared remarks. I will be pleased to answer any questions you or other members of the subcommittee may have at this time.

AIR TRAFFIC CONTROL MODERNIZATION

Senator LAUTENBERG. Thank you very much. It is not a very optimistic picture of things, to say the least.

I want to talk about the air traffic control modernization. We are going to discuss several things now, and obviously we will be time pressed on this because I have other meetings to go to, the Budget Committee being one of them. I do not want to miss out on that juicy information.

Let me ask you this. Is FAA's characterization of 95 percent of projects being under contract a good indicator of the progress of modernization? It is hard to even ask that question after what has been said.

Mr. MEAD. No; you can take those numbers and do many different funny things with them. I can tell you also that 32 percent of the projects are complete. The bottom line is that you need to bump that up against the 95 percent figure. Also, the 32 percent completed projects represent 4 percent of the total cost.

Senator LAUTENBERG. What are some of the examples of the even less stellar systems that have been installed today?

Mr. WURSTER. Mr. Chairman, just a couple examples are nondirectional beacons, which are navigation devices.

Senator LAUTENBERG. What has happened there?

Mr. WURSTER. They are delivered but not all installed. Those are about $30 million, total cost. Terminal recorders which provide weather information to aircraft and the terminals are another example.

Senator LAUTENBERG. And what is the condition, the output and the work flow condition there? Good quality, overrun in cost, et cetera?

Mr. WURSTER. I am not familiar with that project specifically. We have not done any work on that particular system.

Senator LAUTENBERG. All right. So why do you present that? What kind of an example are you trying to point out with that?

Mr. LI. What we are trying to point out, Mr. Chairman, is the fact that when we are talking about 4 percent of cost, these are the smaller-type systems. They are not the important ones that are coming down the line.

Senator LAUTENBERG. This is a total $30 million investment. Right? Out of a total now projected——

Mr. LI. That's correct.

Senator LAUTENBERG. Well, what are we talking about?

Mr. LI. We are talking about $27 billion until the year 2000. And even when we talk about 4 percent, we are talking about 4 percent of the initial baseline cost of $15.8 billion.

Senator LAUTENBERG. Because otherwise, that 4 percent is almost $2 billion? No, $1.1 billion.

So I am sure that you can give me other examples of relatively minuscule accomplishments.

Mr. LI. Yes.

SYSTEMS PERFORMANCE REQUIREMENTS

Senator **Lautenberg**. In 1981, the 10-year, $12 billion NAS plan was semilaunched. Today it is estimated, as you have repeated here several times, to cost $27 billion by the year 2000. Many of the delays we have discovered are caused by software/hardware vendors who cannot meet their requirements. That suggests something about the requirements. What does it suggest about them?

Mr. **Li**. The problem, Mr. Chairman, with requirements, is twofold. First of all, FAA has a hard time in defining what they really want to do. They have a hard time getting together with the users themselves in trying to identify what it is they want to do.

The other side of the coin is they make them so stringent, and my colleagues from IMTEC can talk to that, that vendors have difficulty in meeting these requirements. That causes delays.

Senator **Lautenberg**. That is a real dilemma because the cry at the Agency is that Congress is trying to micromanage these things. If the requirements are less stringent, it is also conceivable that we could just open Pandora's box there and have the contractor pointing a finger and saying you were not specific enough.

What can be too stringent? If you have performance objectives that have to be met, that sounds like it is standard operating procedure. I mean, at this point we want to be at these levels. What are the stringency requirements you think make for bad development, bad bidding, bad target timetables, et cetera?

Ms. **Hecker**. I think the key one, sir, is on the AAS and the VSCS, the voice switching and control system, which is the major switching and communication system. These are two of the largest of the 12 major systems. A key requirement of both is that they do not go down more than 4 seconds a year.

Now, there is a lot of judgment in that. Why is it not 6 seconds, or 12 seconds, or 1 minute? That particular requirement is a factor that substantially increases the cost of the systems, substantially complicates their development, and requires the system to be developed with tremendous redundancies.

And, in fact, on the VSCS, one of the contractors noted that, at best switching systems currently in use can only meet a 3-minute per year downtime requirement.

Senator **Lautenberg**. Is the standard required because of the precise timing needed in the management of aircraft in the skies? I mean, 3 seconds, 12 seconds gets to be a long, long time.

Ms. **Hecker**. Well, it is a substantial improvement from what they have now. While it is true that FAA is trying to design a much more efficient, comprehensive, and safe system, we in the past have actually questioned this particular requirement.

Senator **Lautenberg**. Because redundancy implies that you wipe out the downtime risk, and it should not have to be so much. I mean, all of us were shocked at AT&T's glitch with the international phone communication system. And I forget how long that time was, but it was not very long and it practically threw the whole global communications network into a panic. So what do you do to keep all that equipment flying?

Mr. **Willemssen**. To some extent, Mr. Chairman, it is a matter of initially making judgments on the risks involved. If FAA is going to demand 4 or 5 seconds downtime per year, then it has to understand that the development effort is going to be extremely complex, and it is going to take a lot of time and a lot of money. You can contrast that with maybe lessening the requirement to some degree and maybe FAA could get something quicker at a lower cost. It is a matter of making those tradeoffs. The FAA has decided on very stringent requirements at a high cost.

Senator LAUTENBERG. Four seconds a year. I was thinking of per incident. That is a pretty stringent requirement.

Mr. MEAD. This is an issue that comes up with a lot of different NAS plan systems. We have looked at ones with 99.999 percent. And Allen has a point to make, too.

Senator LAUTENBERG. What is 4 seconds out of the total effective use of the system. It could be a precious 4 seconds. You could conceivably have 1 minute as long as there is an adequate system for alert out there that says look, this is what you have to do and it may cause a 20-minute delay in the flight arrival time or something of that nature, but——

Mr. LI. Mr. Chairman, there is another issue, and this has a real bearing on what this particular subcommittee is trying to do in terms of cost. When you build a system, you have different components. It does not make sense to have one component to be very reliable and have the other systems that depend upon it to be less reliable.

Let me give you an example. A few months ago, the host computer in Leesburg went down. That is a very reliable computer. The controllers suddenly lost all ability to be able to track the aircraft. This was later traced to a failure in the communications link feeding from the radars to the computer system. So we need a total system to be available. To have only one single component to be super-reliable makes no sense.

Senator LAUTENBERG. Excuse me just a minute. I am going to just ask a couple of questions because that budget meeting is coming to some kind of conclusions that I do not want to miss.

So I am going to ask you a couple of questions and then we will submit the rest in writing.

COST/BENEFIT ANALYSES

Does the present systems engineering and integration contractor do the cost/benefit analysis and priority setting as you think they should?

Mr. MEAD. Yes, it does, but their views are often constrained or they are ignored. I gave you one example earlier on the ISP.

The cost/benefit analysis that Martin Marietta did was not completed until after they had come up here, justified the system for you and started to procure it.

Ms. HECKER. That is similar to the instance that we have seen in Mode S. You could say, yes, Martin Marietta did an analysis. However, FAA asked them to do the analysis to support the decision to buy more Mode S systems without fully looking at other alternatives.

CONCLUSION

Senator **Lautenberg**. All right. Well, we thank you very much. As usual, I find your information of great interest and of great help. It discourages one about the FAA's inability to accurately estimate scheduling and costs—an inability which, by the way, is not unique to FAA; it is not unique to government today. I know from my own experience that very often in the commercial sector, where it is thought that the greatest wisdom exists, they are not as wise as we would like to think. And very often contracting out creates a different kind of problem and a lack of control, et cetera.

But at some point we have to deal with these things in a realistic manner so that we can finance them, we can plan them. We are permitting the aviation industry to develop at whatever pace it chooses.

Now, that is the epitome of free enterprise, and I guess we are supposed to do that. But they travel on highways that we are supposed to manage, and they carry passengers whose safety we are, as a last resort, responsible for.

Of course, the airlines are the first line of defense and I think they do a very, very good job, as does FAA. I mean, if you look at America's aviation system, we are by far the best. No one carries the volume of traffic that we do, and if you listen to other countries' problems with their respective FAA's and development systems and see where they are, we are clearly the best in the business.

But it is frustrating to see that we cannot ever get this thing pinned down. I guess what is said in the business, the systems business, procurement, anything that smacks of a complicated system, invariably is going to be accompanied by a missed target, whether that is cost or time.

If it is reasonably contained, and I hate to say this, I mean, you know, as a heart operation or brain operation, pretty good—you would like to think it was perfect, but we live in the real world when it comes to these things. If it is close, that counts also.

I mean if something is 10 percent off the mark, well, the conditions do change. It is a dynamic situation we are dealing with. But when we see the kinds of failures that we have here, failure to understand, failure to design, failure to define, and wind up sitting here just frustrated by our inability, the last thing that you folks want to do is report bad news.

Even though at times you are kind of accused of being the undertakers of the Hill, the fact is that perhaps you would be better regarded as the EMS. But that is not good either, based on what we have seen lately.

But in any event, you have an enormous responsibility. I think you do it well, and I thank you for being here.

SUBMITTED QUESTIONS

The questions that we will submit to you we will ask for a prompt response, because next week we are going to see Admiral Busey, and in order to be fair to him and the Agency, we should have as much information as we can.

[The following questions were not asked at the hearing, but were submitted to GAO for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

AIR TRAFFIC CONTROL (ATC) MODERNIZATION

SENATOR LAUTENBERG: Your statement portrays the NAS Plan in less than flattering terms. Delays seem to be the norm rather than the exception. While I understand you attribute these delays to FAA's underestimating the complexity of the effort, why are they still happening? Is FAA eternally optimistic?

ANSWER: We believe the delays now being experienced are partly a legacy of past decisions by FAA. The agency's past decisions to proceed to production without adequate operational testing is coming back to haunt them. They considered development to be of minimal risk. The initial schedules were also optimistic. For example, in the case of Microwave Landing Systems, FAA projected in 1983 that the first site would be operational in 1985. FAA did not operationally test prototypes before awarding the contract in 1984. The contractor experienced numerous difficulties and the contract was eventually terminated in 1989.

SENATOR LAUTENBERG: In 1981, the 10-year, 12 billion dollar NAS Plan was launched. Today it is estimated that the total costs could reach 27 billion dollars by the year 2000. What sort of systems are causing the overall price tag of modernization to soar to 27 billion?

ANSWER: Modernization has taken on a new complexion in the past few years. Additions to the original plan generally fall into three categories. First, changes were needed to correct deficiencies in initial system designs. For example, the Voice Switching and Control System has increased from 258 million dollars in 1982 to the current estimate of 892 million. Second, short-term projects designed to bridge the gap between the old system and new NAS Plan equipment--such as the over 400 million dollar Interim Support Plan--have been added. Third, FAA has added projects to meet new requirements such as the next generation airport surveillance radars which is valued at about 1 billion dollars.

ATC MODERNIZATION

SENATOR LAUTENBERG: Why did FAA rush to award contracts without sufficient operational testing?

ANSWER: FAA underestimated the complexity of what had to be done. It thought off-the-shelf equipment could be easily modified and software easily produced. What it actually found was quite different than the low-risk effort it thought it could undertake. As a result problems arose and schedule delays became the norm. For example, the first generation flight service station computers sat in storage waiting for its software to be fixed. As a contrast, FAA operationally tested prototypes of the Terminal Doppler Weather Radar before committing to full production. That system is basically on-target from its original schedule. Unfortunately, operational testing has been a casualty when projects are delayed. In order to make up time, testing is either deleted or decreased in scope. For example, FAA planned to reduce its testing of the Voice Switching and Control System. GAO made a recommendation advising against such a reduction.

SENATOR Lautenberg: You state that the new Capital Investment Plan has the opportunity" to address priorities. Don't you think that this should be a requirement of the new plan?

ANSWER: Definitely. GAO has called on FAA to prioritize its modernization projects for the past few years. This is especially important with respect to the new plan since it will differentiate between short-term and long-term capacity projects. Decision makers will be better off understanding the impact of FAA's proposals.

SENATOR LAUTENBERG: Do you think the Administrator's new Capital Investment Plan will eliminate the problems you identified over the past few years?

ANSWER: We believe its a good start. However, FAA still needs to prioritize projects.

SENATOR LAUTENBERG: What do you mean by prioritizing? Should some systems be deleted, or do we run the risk of letting budget cutters eliminate less cost-beneficial systems?

ANSWER: We believe FAA has been reluctant to prioritize projects based on such fear. However, within the current climate of budget constraints, setting priorities is urgently needed. The NAS Plan projects cannot be treated as a monolith. Some projects may no longer be appropriate due to recent changes, either in terms of schedule or equipment quantities. For example, the schedule for the Terminal NEXRAD--designed as an interim system to detect wind shear--now bumps up against the Terminal Doppler Weather Radar because of delays in the NEXRAD program. Therefore, continued need for the Terminal NEXRAD is open for debate. Priorities can also help assure equipment is provided to the most needy locations. For example, delivery schedules were changed to accelerate new systems reaching Chicago as the result of a special FAA study. We are concerned that there may be more such special cases.

SENATOR LAUTENBERG: Does FAA use information from Martin Marietta--such as cost/benefit studies--when making its decisions? If not, why not?

ANSWER: GAO has not been privy to any formal priority setting processes in the FAA. Therefore, we do not know how cost-benefit information is being used. However, based on recent discussions with officials from Martin Marietta, FAA is starting to use such data more extensively. We hope this will result in an integration of cost-benefit analysis in the setting of priorities.

SENATOR LAUTENBERG: The Committee last year called for a new organizational structure to manage the NAS Plan. Does the recent appointment of an executive for procurement satisfy the Committee's concerns?

ANSWER: We believe that the recent changes are partially responsive to your concerns. All NAS projects will now reside under the Executive Director for System Development. This was not previously the case. However, the authority and resources needed to install NAS systems will reside in the operational side of the house. The new Executive Director for Acquisition will not be the "NAS czar" perhaps envisioned by this Committee. His role will be to provide oversight and independent testing of projects. We believe, that while not directly responsive to your concerns, this is an important step for the FAA toward an improved procurement process.

INTERIM SUPPORT PLAN

SENATOR LAUTENBERG: Mr. Mead, in your testimony, you state that the FAA did not properly plan and assess its needs before seeking funding from Congress. What was the original rationale for the Interim Support Plan?

ANSWER: FAA was concerned about capacity shortfalls at terminals because air traffic was increasing. The agency was also concerned about equipment reliability at those facilities. Since major NAS Plan projects--such as the Advanced Automation System--were delayed, FAA believed it needed an interim fix. As a result, it formed a team of headquarters and field staff to look at these perceived problems. The team developed specific equipment solutions. These came to be known as the Interim Support Plan, or ISP.

SENATOR LAUTENBERG: Was this a valid rationale?

ANSWER: Although the team that designed the ISP understood that problems existed, it didn't quantify how the ATC system was falling short of its capacity and reliability goals. In its haste, FAA sought funding before the agency's normal review process was complete. We believe that process would have addressed whether the specific ISP solutions would meet quantified shortfalls.

SENATOR LAUTENBERG: How and why was the decision made?

ANSWER: The Administrator at that time--Mr. McArtor--approved the team's proposal. FAA believed its operational needs were urgent, and made the decision to request funding.

SENATOR LAUTENBERG: How much of the ISP is due to NAS Plan delays?

ANSWER: We believe that about two thirds of the total funding for ISP could be attributed to delays in NAS modernization. The other one third--airport surveillance radars (ASR-9) and communication system back-ups (ICSS Bypass)--may have been required anyway due to radar coverage and reliability requirements.

SENATOR LAUTENBERG: You state that 7 out of 10 projects were not found to be cost beneficial by FAA's own outside consultants. Why were these findings ignored?

ANSWER: We believe FAA had little incentive to address this issue since the Congress had already begun funding the ISP before the cost-benefit study was conducted. Our work on the Interim Support Plan continues and we expect to report the results to you later this year.

FAA WORK FORCE ISSUES

SENATOR LAUTENBERG: This Committee, for the past several years, has expressed concern about FAA's underestimating its personnel needs. You state that FAA has not yet identified the staff resources to install, test, and run new NAS Plan equipment. So, is what you're telling me that, if the NAS Plan equipment and systems weren't behind schedule, then we would be having serious staffing problems?

ANSWER: Yes, we believe that had equipment been delivered on time, the lack of field implementation resources would have further delayed new systems and the resulting benefits to FAA and the flying public.

SENATOR LAUTENBERG: Why haven't the necessary human resources been identified?

ANSWER: We believe FAA originally underestimated the effort needed to install systems. Although many of these systems are "turn-key" in nature--that is, contractors are responsible for installing them--substantial resources are needed for planning, site construction, testing, and for controllers and technicians to be trained. FAA appears to have been reluctant to tell the Congress the full extent of these needs. For example, 2 years ago it testified that the Technical Support Services Contract (TSSC) would be sufficient to meet its needs. GAO testified that the TSSC would not be enough based on FAA's own estimates at that time. FAA officials now recognize that there is still a shortfall even with the use of the TSSC. Additionally, changes in schedules and other assumptions (e.g. training) make it difficult for FAA to come up with good estimates at a given point in time.

SENATOR LAUTENBERG: Has GAO studied the age in work force at FAA? In other words, is FAA's poor scheduling of new personnel going to be further exacerbated by losing the qualified technicians, inspectors, and controllers they now have?

ANSWER: Yes, GAO has looked at this issue and FAA's technician and safety inspector work forces will incur high attrition rates over the next few years. In September 1987, we reported that the outlook for maintenance technician staffing was not good because of the large number of retirements that FAA could experience in the near future and the long training period required for replacements. Currently, 3,700 or about 38 percent of the technicians and engineers comprising in the maintenance work force are eligible to retire or will be within the next 4 years. This attrition peaks in 1991 with about 650 maintenance technicians expected to retire. Similarly, about 300, or a little over 10 percent of the FAA aviation safety inspectors are currently eligible to retire. In contrast, less than 2 percent (258) in the controller work force are eligible to retire.

SENATOR LAUTENBERG: Because the modernization effort is not the originally planned, fixed, 10-year project, but more of an ongoing effort that will take a number of years, what in-house systems engineering expertise should the FAA have?

ANSWER: We believe FAA has the type of expertise required, but not in sufficient numbers. In fact, it is FAA which provides training to its support contractors in the world of air traffic control. We believe FAA should now consider hiring more of its own engineers, computer analysts, and human factors specialists. In-house staff could be used to develop transition plans, review equipment specifications, and design interfaces between new systems.

SENATOR LAUTENBERG: Would this be a cost-effective way to proceed, rather than relying on outside contractors?

ANSWER: We believe that the on-going nature of modernization makes it more likely that this option might now be cost-effective. Also, the current slowdown in the defense industry could provide FAA with a pool of talent that may not have been available previously.

SENATOR LAUTENBERG: The Office of Training and Higher Education is "trying to do too much with the dollars allocated". Are they asking for enough, or is it a problem of planning and priority setting?

ANSWER: It is some of both. The problem with funding is one of allocation of funds among FAA's competing programs. When cuts have to come, training is often one of the first places that an agency looks to make reductions and FAA is no exception. On the other hand, more effective planning is also needed. For example, prioritizing the 47 projects in FAA's $406 million plan to modernize and upgrade work force training (Flight Plan for Training) would go a long way toward making sure that only top priority projects are undertaken should program cuts be necessary.

SENATOR LAUTENBERG: Administrator Busey recently announced plans to rely more on the airlines to make "self audits" of their operations. Has FAA developed a plan for monitoring the effectiveness of the airlines "self audit concept"? Will additional training be needed by the FAA inspectors that will assess this concept?

ANSWER: FAA has not developed a plan for monitoring the effectiveness of the "self audit" concept. GAO believes that monitoring this concept will clearly require different skills than those currently possessed by aviation safety inspectors. For example, FAA will likely need to train or hire inspectors that have evaluative or analytical skills in order to effectively monitor airline "self audit" programs.

FAA WORK FORCES

SENATOR LAUTENBERG: What is the status of FAA's plans to revise and update the Flight Plan for Training?

ANSWER: FAA is currently revising the Flight Plan for Training and plans to have this effort completed by May 31.

SENATOR LAUTENBERG: Has FAA acted on the concerns expressed by the air traffic controllers responding to GAO's most recent survey?

ANSWER: In response to our survey work, FAA directed its facility managers to review our findings and to develop corrective action plans to address the controller concerns raised. We have not reviewed them to determine the extent or appropriateness of the actions taken, but we intend to do so.

SENATOR LAUTENBERG: You suggest that the incentive pay program has only had mixed results. What are your concerns?

ANSWER: The purpose of the Pay Demonstration Project is to attract and retain experienced FAA employees (inspectors, technicians, and controllers) at hard to staff locations. Currently, controllers account for about 73 percent of the 2,200 employees participating in the project. After 9 months, however, only 4 of 9 participating air traffic control locations have shown an increase in the number of experienced (full performance level) controllers.

FAA AUTOMATED SYSTEMS

SENATOR LAUTENBERG: Did the GAO review of Mode S uncover whether FAA knew that additional development was required when they awarded the production contract?

ANSWER: Mr. Chairman, evidence exists that FAA knew extensive development efforts were required. In fact, the production contract called for a new design and development and included a substantial length of time to complete this effort. In addition, we pointed out in a 1983 report that MODE S engineering model tests had shown that the prototype systems were unable to met some important requirements, such as tracking many aircraft in a small area. We believed the problems were serious because the contractor had concluded that new hardware and software would be needed. Although we recommended that FAA further develop and test the system before proceeding, FAA and the Department of Transportation awarded the production contract, after stating that current hardware and new software would meet FAA requirements. It is interesting to note that Texas Instruments, the contractor which built the prototypes, did not bid on the production contract.

AUTOMATED SYSTEMS

SENATOR LAUTENBERG: What alternatives exist to deal with the current MODE S (surveillance and communications) problems and to satisfy long term needs for data communications?

ANSWER: Regarding current problems, the range of alternatives was significantly narrowed on April 17, 1990, when FAA agreed to modify the contract to further delay MODE S deliveries and to deploy interim systems which will not meet all requirements. This action occurred 6 days after FAA received our draft report which called for an independent evaluation of the economic, operational, and technical risks involved in continuing the Mode S contract. Although FAA has agreed to evaluate the technical and operational risks of completing the program, we believe an independent evaluation of technical, operational, and economic risks should have been conducted before FAA agreed to modify the contract. Agency assurances that problems will be overcome within the latest agreed-upon schedule are not entirely convincing. FAA has been repeatedly surprised by the extent of problems, and even as the most recent changes were being negotiated, another 1 year delay occurred. If the problems are more severe than FAA now believes and the contractor again cannot deliver a working system, the government will have continued to spend money without receiving the system it wants.

Whether or not the current contract is successful, several long term alternatives exist to provide data link services. In fact, the availability of other alternatives contributed to our conclusion that buying additional MODE S systems is not justified. For example, FAA is now experimentally using an airline-owned system to communicate flight plan information to aircraft before take-off. Canada has been testing a similar system to transmit clearances to aircraft in flight, and this system is expected to become operational soon. FAA also plans to use existing data communications satellites, beginning in 1991, to transmit the location of aircraft flying over ocean areas where surveillance coverage does not exist. In 1993, FAA expects to be able to transmit air traffic control messages in these areas. According to one FAA official, these services could be made available in U.S. airspace as early as 1995.

SENATOR LAUTENBERG: Given the current, aging air traffic control system, can the AAS development schedule be accelerated?

ANSWER: It is unlikely that the development schedule can be accelerated. AAS is a very large and complex effort with development timeframes that were underestimated. IBM currently has about 1500 people working on AAS. The FAA has about 60 of their own people on AAS plus another 340 contractor people providing technical and management support. Adding more people would probably not help accelerate AAS. History shows that adding more people to a late project only makes it later given the time it takes to train new people.

FAA could consider changing the sequence of AAS development and deployment. For example, since terminal automated systems have been experiencing more difficulties than en route systems, FAA could consider revising its deployment approach to upgrade terminal systems with new equipment before en route systems are replaced. Since the current utilization of the computers in en route centers is generally lower than the computers at terminal facilities, this sequencing change may be advisable. Second, regarding terminal systems, FAA's current plans are to replace smaller terminals first. FAA could consider changing these plans and replace large terminal systems with documented capacity shortfalls before the smaller systems which have not been experiencing these problems.

SENATOR LAUTENBERG: What do you suggest as the most appropriate set of steps to meet current, interim, and long term TRACON needs until the AAS is deployed?

ANSWER: We believe our recommendations in last year's report on TRACON capacity shortfalls need to be implemented. To address immediate shortfalls, we believe FAA should gather and report important capacity-related data, identify quickly those TRACONs that have the most urgent problems, and identify potential solutions to the problems. Identification of potential solutions should include considering those temporary measures that have been successfully used at selected TRACONs, such as delaying the use of training displays, and delaying the receipt of flight plans. FAA's efforts to acquire and install solid-state memories as quickly as possible should also help alleviate some immediate shortfalls.

FAA should also implement a computer capacity and performance management program for TRACON computer systems that includes

- analyzing trends in data processing work loads to determine when existing system capabilities will be saturated,
- conducting comprehensive analyses of the utilization, processing capacity, and input/output rates of present and projected work loads, and
- ensuring that the FAA Technical Center test facility uses configurations that more accurately replicate the processors, displays, and traffic at the busiest operational sites.

We acknowledge that the project to expand TRACON capacity by reopening a production line to produce 1960s vintage computers may be necessary in the short run. However, we are concerned that this solution may be inadequate to meet long-term TRACON requirements until the AAS is fully installed. Therefore, FAA needs to perform a complete analysis of all available alternatives for meeting the larger TRACONs' air traffic requirements for at least the next 10 years.

SENATOR LAUTENBERG: How does the CORN (Corn Resources Nucleus) procurement differ from other computer system procurements GAO has evaluated.

ANSWER: Generally, the other procurements GAO has evaluated involve the direct purchase of computer equipment or software. The CORN procurement involves the purchase of computer services from a vendor. These services include computer processing, conversion and documentation of existing software, and training.

SENATOR LAUTENBERG: What is your concern with CORN's steep growth requirements if the agency only pays for what it actually uses?

ANSWER: There are two concerns. First, the larger and more demanding a computer growth requirement is, the lower the number of vendors available to meet the requirement. A procurement as large as CORN can only be handled by the largest computer companies. If the 1300 percent growth requirement is in fact too high, then FAA may have unnecessarily limited the possible choices. Second, vendors must design solutions and attempt to cover costs for a system that can handle this size. Therefore, the per unit cost can be expected to be high for a small amount of usage.

FAA SECURITY

SENATOR LAUTENBERG: You talk about training in a number of job categories. Have you looked at FAA's training of its own security personnel?

ANSWER: We have not looked at FAA's training of security personnel overall. However, we reported in August 1988, that FAA's security inspection process lacked sufficient testing and verification procedures to disclose deficiencies in key airport security systems, such as lock and key controls and personnel and vehicle identification. We recommended that FAA develop such procedures, issue instructions to inspectors on their use during the inspection process, and to incorporate the procedures into the inspector's formal training curriculum to ensure that inspectors are adequately trained in the inspection process to be followed. FAA agreed with our recommendations. We have not followed up to determine whether the recommendations were effectively implemented by FAA.

SENATOR LAUTENBERG: Does the FAA conduct what you would consider good evaluation of its security program?

ANSWER: In 1988, FAA implemented a Civil Aviation Security National Airport Inspection Program primarily to determine if FAA directed security initiatives at selected airports were implemented and whether new ones are needed. As of January 1990, 26 National Inspections had been completed and FAA expects to do about 10 more each year. These inspections are a step in the right direction in terms of helping FAA identify systemic security problems and thereby strengthening overall airport security. These National inspections, however, do not assess the quality of inspections made by FAA security inspectors.

SENATOR LAUTENBERG: Does FAA operate its security inspection program on a priority basis?

ANSWER: FAA's security inspection program is prioritized in the sense that higher risk, generally larger, airports receive more frequent security inspections. At the 17 highest risk airports, FAA has permanently assigned security inspectors who make daily assessments of security. In contrast, FAA security inspections at smaller, lower risk airports are done much less frequently.

SENATOR LAUTENBERG: Does FAA use their existing security personnel well, i.e., are they fully employed inspecting airports and air carrier security programs?

ANSWER: FAA inspectors performing Federal Air Marshal duties are not fully utilized. Most FAA security inspectors also double as Federal Air Marshals. However, when security inspectors are temporarily detailed to perform Air Marshal duties they do not perform airport/air carrier inspections. This appears to be an ineffective use of manpower since the Marshals often "lay-over" at airports while between flights for several hours, sometimes days. In these situations, they could be used to make airport and/or air carrier security inspections.

SENATOR LAUTENBERG: Are you familiar with the "access control" rule being developed by the FAA?

ANSWER: We are somewhat familiar with the rule but have not made any assessment of it. In general, our understanding is that the rule allows airports to propose alternatives to installing computerized ID card readers at all airport access points.

SENATOR LAUTENBERG: In your estimation, does FAA have a strategic plan in place for security?

ANSWER: FAA has not developed a strategic plan for aviation security. FAA has developed a Civil Aviation Security Improvement Program which consists of about 25 short term initiatives to improve security. These initiatives include such items as reviews of specific security procedures, assigning additional security inspectors to Europe, Africa, and the Middle East, establishing a National Aviation Security Advisory Committee, etc.

QUESTIONS SUBMITTED BY SENATOR GRASSLEY

AMTRAK

SENATOR GRASSLEY: In your testimony, during your discussion of Amtrak, you mention that Amtrak will need continuous federal support to sustain its present passenger train operations for the foreseeable future. You go on to say that this is so despite Amtrak's steadily decreasing need for federal subsidies. It's true that Amtrak has slowly but steadily lowered its need for federal subsidies over the years. Do you have an estimation as to when Amtrak will no longer need federal subsidies to survive? Is there light at the end of the tunnel?

ANSWER: Amtrak will need continued federal subsidies for its operating expenses and capital needs at least until 2000 and probably beyond. The amount of federal subsidies needed to cover operating expenses has steadily decreased over the years but Amtrak expects to need continued support in this area. Amtrak has a goal to eliminate this need by 2000. Amtrak's success in achieving this goal, still some 10 years away, will be influenced by many factors that are difficult to predict.

Concerning its need for capital assistance, Amtrak expects it will need $300 million per year through the end of the decade to meet its needs for new trains and equipment. At this time, Amtrak has no stated goal for eliminating the need for a federal subsidy in this area. In addition to the federal government, Amtrak expects to look to state governments, the private sector, and its own internal sources for these capital needs as it has done in the past. Amtrak's success in this area will also depend on many factors and future events. As a result, it is difficult to predict at this time a likely date when this need will end.

HIGHWAYS

SENATOR GRASSLEY: What states are we talking about when the statement is made that some states are not meeting their maintenance responsibilities because of inadequate funding?

ANSWER: The two states are Louisiana and Michigan. We visited a third state--California--which did not appear to have maintenance deficiencies. But even there, state transportation officials told us that because of rising maintenance costs, the state may be hard-pressed to meet future maintenance needs.

In addition, an earlier report by the DOT Inspector General found 3 of 4 states reviewed--Alabama, Kentucky, and Florida--did not perform needed maintenance. The fourth state, Georgia, was able to carry out needed maintenance.

SENATOR GRASSLEY: When you mention inadequate funding, are you referring to the inability of the states to get their own fiscal houses in order, or are you referring to a lack of support from Washington?

ANSWER: States are solely responsible for Interstate maintenance. However, if a section of Interstate pavement has deteriorated to such a degree that costly repair work, such as resurfacing or reconstruction, is needed then the federal government pays 90 percent of the repair bill. Federal funding of such costly repairs could actually serve as a disincentive to an effective state maintenance program.

The primary incentive the federal government provides to the states to ensure sufficient maintenance of federal-aid roads is the threat to withhold federal funds, should a state not adequately maintain its federal-aid highways. As a federal transportation official noted, this type of punishment is like an atom bomb that DOT is reluctant to use.

SUBCOMMITTEE RECESS

Senator **Lautenberg**. This subcommittee is recessed.

[Whereupon, at 11:38 a.m., Thursday, April 26, the subcommittee was recessed, to reconvene at 9 a.m., Thursday, May 3.]

DEPARTMENT OF TRANSPORTATION AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1991

THURSDAY, MAY 3, 1990

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 9:04 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Frank Lautenberg (chairman) presiding.

Present: Senators Lautenberg, Byrd, Harkin, Sasser, Mikulski, D'Amato, Kasten, Domenici, and Grassley.

DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

STATEMENT OF HON. JAMES B. BUSEY, ADMINISTRATOR

ACCOMPANIED BY:

- NICHOLAS S. STOER, DIRECTOR OF BUDGET
- GREG WALDEN, CHIEF COUNSEL
- DALE E. McDANIEL, DEPUTY ASSISTANT ADMINISTRATOR FOR POLICY, PLANNING, AND INTERNATIONAL AVIATION
- CHARLES HUETTNER, DEPUTY ASSISTANT ADMINISTRATOR FOR AVIATION SAFETY
- WILLIAM POLLARD, ASSOCIATE ADMINISTRATOR FOR AIR TRAFFIC
- BROOKS GOLDMAN, ASSOCIATE ADMINISTRATOR FOR ADMINISTRATION
- MONTE BELGER, ASSOCIATE ADMINISTRATOR FOR AVIATION STANDARDS
- ARNOLD AQUILANO, ASSOCIATE ADMINISTRATOR FOR AIRWAY FACILITIES
- HERBERT McLURE, ASSOCIATE ADMINISTRATOR FOR HUMAN RESOURCE MANAGEMENT
- ANTHONY BRODERICK, ASSOCIATE ADMINISTRATOR FOR REGULATION AND CERTIFICATION
- MARTIN POZESKY, ASSOCIATE ADMINISTRATOR FOR SYSTEM ENGINEERING AND DEVELOPMENT

OPENING REMARKS

Senator LAUTENBERG. I call this hearing of the subcommittee to order.

Today we look forward to hearing from Adm. James Busey, the Administrator of the Federal Aviation Administration. This is Administrator Busey's first appearance before the subcommittee and, drawing from his previous experience, he is here to defend and explain the administration's request for fiscal year 1991 funding for FAA.

BUDGET REQUEST

The portfolio of FAA is quite extensive. The total amount of FAA resources this year is $7.14 billion, 25.4 percent of the DOT's total spending for fiscal year 1991. FAA is requesting $8.8 billion, 30.8 percent of the Department's total, and would be employing 52,768 people which is almost 50 percent of the Department's total work force, obviously a major share of our whole transportation resource.

FAA's responsibilities are enormous. It runs the Nation's airspace systems, both operations and modernization; it employs persons across a wide variety of disciplines from controller to maintenance technicians, airplane inspectors, security specialists.

We have to, however, regard their 1991 funding request in the context of the reality of budget constraints that this subcommittee faces and the programs for which FAA has or has not made use of funds previously provided.

Given the present budget climate, this committee is going to be hard pressed to find the $1.1 billion or 16 percent increase over the 1990 enacted level that the Department is requesting. So our examination will have to be thorough. There is not enough funding to go around, and every dollar that we provide has to be justified and accounted for.

Admiral Busey, the previous administration took great pains to point out when and where Congress did not provide all of the funding requested and pointed to us, the Congress, as a source of the FAA's problems.

I can tell you this. No agency I know has enjoyed the general funding support that your agency has received; this, despite the fact that for the past several years FAA has annually notified Congress that it has to defer spending of over $1 billion in previously appropriated funds, and critical NAS plan projects fall further behind schedule, which contributes to congestion and safety concerns and drives up the price of completing the national airspace system upgrade.

Before turning to Admiral Busey and his review of the FAA's request for 1991 funding, I would note that, although other members are not yet here, we will obviously when they arrive ask them if they have opening statements and give them the courtesy of doing that.

I would also make mention of the fact that it is routine for us, Admiral, to submit questions in writing. Your department is diligent. They get back to us in a hurry. They meet the deadlines typically at the expense portion allowed for those returns.

So we welcome you. I just want to add one final note. In the last few years since I have been a member and chairman of this subcommittee, typically we have been asking more of FAA than FAA's requests have been. We asked for higher levels of employment of controllers, for better skills, for quicker development of a trained work force, and often we provided extra funding without it having been requested by the administration.

This year is different for the reasons I have mentioned, but it also makes it more difficult for us. As I also indicated, this is a very popular department within the Senate and Congress, the reason being that our aviation industry is and has been critical to the development of this country's resources. The economy, the travel factor, recreational factor, has enabled us to attach our coasts within reasonably short periods of time of travel and to have the kind of movement that is essential in this very developed society that we have.

So there are lots of friends here, and that is why it is ever more disappointing when we look at the missed targets in both time and funding, when we look at what I think is now obviously inadequate planning to take care of the objectives. It challenges the credibility of the Agency, and it makes the fight for resources just a little bit harder. Once put into the competitive arena of a balanced national transportation network, it makes our assignment even more difficult, frankly to the point of which it almost becomes torturous, because I happen to believe that transportation is, other than war and peace and basic economic issues, perhaps the most important issue facing our country in its development in the years ahead, as we face the expected increases in automobile traffic, the expected increases in aviation traffic, and the expected or needed improvements in railroading.

So all these things come together, and we fight very hard to get the funding resources that we need. I sit on the Budget Committee. Right now I am assured that we are going to do OK, but I have no assurance that we are going to be able to fulfill the requests for FAA for Coast Guard as well as taking care of the other parts of the transportation matrix that have to be dealt with.

So we welcome you. You have had an illustrious career in the Navy and government service. You were chosen because of the particular and unique skills that you brought. You are going to have to employ every one of those experiences and skills that you have to get us back on target, as we said, and to move things along.

So with that, Admiral, I invite your testimony.

STATEMENT OF JAMES B. BUSEY

Mr. BUSEY. Thank you, Mr. Chairman. I appreciate the opportunity to appear before you today with my colleagues to discuss the Federal Aviation Administration's fiscal year 1991 budget request.

With me this morning is Mr. Nick Stoer, my Budget Director; Greg Walden, my Chief Counsel; Dale McDaniel, my Assistant for Policy; Charles Huettner, my Assistant for Aviation Safety; Bill Pollard, my Associate for Air Traffic; Brooks Goldman, my Associate for Administration; Monte Belger, my Associate for Aviation Standards; Arnold Aquilano, my Associate for Airway Facilities; Herb McLure, my Associate for Human Resource Management; Tony Broderick, my Associate for Regulation and Certification; and Marty Pozesky, my Associate for Systems Engineering and Development.

Senator **Lautenberg**. We have met many of your colleagues before. We welcome them as well.

BUDGET REQUEST

Mr. **Busey**. Our budget request for the forthcoming fiscal year has been carefully formulated to reflect the realities of the environment in which the FAA must operate. Today that aviation environment is far different than that of a decade ago. Terrorism, aging aircraft, system capacity and modernization are issues with which we must deal on a daily basis.

AVIATION SYSTEM GROWTH

One constant, however, has been system growth. By the year 2000 our forecasters tell us that air travel will nearly double its 1980 levels. Since airline deregulation began in 1978, the number of airline passengers has increased about 73 percent, and we will continue to be confronted with the challenges that that growth brings us.

What does this growing demand for air travel mean to us in the FAA? It means retraining our specialized work force to operate, maintain, and support the new technology that we must develop and install. It means expanding airport capacity. It means removing Federal restrictions to local airports' ability to raise revenue and encouraging more public and private projects. It means increasing security to counter the growing threat of terrorism. It means expanding the FAA's inspection force to respond to aging aircraft concerns, and it means committing significant resources to meet these objectives.

OPERATIONS

For fiscal year 1991, as you have indicated earlier, Mr. Chairman, we are seeking an operations appropriation level of $4.1 billion, a 7-percent increase over fiscal year 1990. The majority of our requested increase, 6 percent, is needed just to sustain current levels of employment and services. The remaining 1-percent increase recognizes the pressing need for additional resources to meet increased demands and allows program growth over fiscal year 1990 to include 495 additional air traffic controllers, 200 more field maintenance technicians, 300 additional safety inspectors, and about 170 new security specialists.

We have very little flexibility in our operations appropriation, since more than 73 percent of it is made up of payroll costs. Eight out of nine people in our operations work force are in safety-related jobs or directly manage those personnel or programs, and the demand placed on them is significant.

In fiscal year 1991 each day they will handle more than 176,000 takeoffs and landings, 132,000 instrument operations, and provide 123,000 flight services. They will conduct 120,000 student-weeks of training. They will operate and maintain over 25,000 aviation facilities. They will perform more than 30,000 security inspections and assessments. They will conduct over 5,000 accident prevention seminars and perform almost 300,000 safety inspections of airlines and other aviation activities licensed by the FAA. They will administer our airport certification and grants programs, and they will provide essential support services that facilitate the performance of our critical safety and operational functions.

FACILITIES AND EQUIPMENT

For our fiscal year 1991 facilities and equipment appropriation, we are seeking $2.5 billion. This 45-percent increase over fiscal year 1990 is needed to fund the acquisitions associated with the modernization of our air traffic control system. The high priority placed on installation of new technology in the President's budget clearly reflects the importance of these capital improvements to aviation and the Nation's economy.

At the same time we are seeking additional funding, I think it is important that we in the FAA ensure that we are getting the maximum benefit from every dollar spent. Improving the acquisition process to promote greater efficiency and economy from top to bottom has, therefore, been one of my personal major goals from day one as FAA Administrator.

ACQUISITION SYSTEM REALIGNMENT

In February, as you know, sir, I announced the realignment of the Agency's acquisition system to deal more efficiently with the increased spending levels needed over the next 5 years. This realignment establishes an independent capability to oversee the acquisition process, strengthens program management functions within the FAA, brings greater focus, discipline, and efficiency into the acquisition process, and enhances our system design capabilities to include stronger relationships between research and development and facilities and equipment programs.

By empowering program managers and holding them accountable, I am confident that we can do a better job of bringing major equipment on line faster and cheaper.

RESEARCH, ENGINEERING AND DEVELOPMENT

Our research, engineering and development programs deal with some of the most sensitive, difficult, and publicly discussed issues of our time: counterterrorism, explosive detection technology, aging aircraft, and air traffic control technology to help us deal with bottlenecks that affect almost half a billion passengers each year.

It is clear that more must be done in these critical areas; therefore, we are requesting $190 million for our research, engineering and development programs which would provide a 12-percent increase over fiscal year 1990.

AIRPORT GRANTS

Our request for airport grants is $1.9 billion, which amounts to a 5.3-percent increase over fiscal year 1990. This amount will fund formula driven grants for airport development projects at commercial airports as well as grants——

Senator LAUTENBERG. Let me be sure that the record is straight. In the text it says $1.5 billion.

Mr. **Busey**. Yes, sir; $1.5 billion.

Senator **Lautenberg**. You said $1.9 billion.

Mr. **Busey**. I am sorry.

Senator **Lautenberg**. No problem. I did not sneak out $400 million without knowing about it.

Mr. **Busey**. Thank you for that correction, sir.

The request assumes that $196 million will be for capacity, safety, security, and noise projects. This funding will be directed to primary commercial airports and their associated relievers for projects which have a significant effect on our overall national air transportation system capacity. As I indicated earlier, system capacity is a major challenge for us in the FAA.

REAUTHORIZATION PROPOSAL

To put these major appropriation requests into context, I want to address how we propose to finance them. As you know, the Secretary of Transportation submitted our 5-year reauthorization proposal to Congress on March 19, 1990. I believe its speedy enactment this summer is key to meeting our aviation challenges of the 1990's. The bill proposes the authorization of higher funding levels in vital program areas and allows a more flexible and dynamic approach in identifying and planning for capital investment needs in an era of rapid growth and change.

PASSENGER FACILITY CHARGE

Perhaps the bill's principal innovation is a provision that would authorize local airports to collect a passenger facility charge or head tax of up to $3 per passenger. This would pave the way for local governments to respond more effectively to capacity constraints. We estimate the PFC's, which are common in some 138 foreign countries, could generate as much as $1 billion annually at our airports which so choose to use this capability. Airport needs continue to grow. Removing the Federal barrier to local passenger fees would help finance those needs.

TRUST FUND

The bill also calls for an increase in the amount of FAA's total budget funded out of the trust fund from the current level of about 57 percent to a level of 85 percent. It would finance this through increased user fees. This is consistent with a series of cost allocation studies, including one by the Congressional Budget Office, which show that 85 percent of our costs can be directly attributed to specific users.

Since 1982, the trust fund has financed only about 57 percent of the FAA's budget, and during this time period the trust fund has funded only about 24 percent of the cost to operate and maintain the aviation system.

We think that the operation of the modernized aviation system is just as important as the purchase and installation of new equipment. We think that the users of the system would receive no benefit from the installation of new technology if that technology is not certified, maintained, and operated for their use.

Our proposal, therefore, places responsibility for funding FAA activities on those who directly use them and benefit from them.

PREPARED STATEMENT

In closing, Mr. Chairman, I want to recognize the contribution that you and the members of the subcommittee have made to the safety and efficiency of our air transportation system. I look forward to working closely with the members of the subcommittee and urge the subcommittee to act favorably on our appropriation request for fiscal year 1991. The amounts we are requesting are absolutely necessary for the FAA to fulfill its significant safety responsibilities on behalf of the American traveling public.

This concludes my summarization of the prepared statement, Mr. Chairman, and we now stand ready to respond to your questions, sir.

[The statement follows:]

STATEMENT OF JAMES B. BUSEY

Mr. Chairman and members of the subcommittee: I appreciate the opportunity to appear before you today to discuss the Federal Aviation Administration's fiscal year 1991 budget request.

BUDGET REQUEST

Our budget request for the forthcoming fiscal year has been carefully formulated to reflect the realities of the environment with which the FAA must operate. Today, that aviation environment is far different than that of a decade ago—terrorism, aging aircraft, system capacity and modernization are issues with which we must deal on a daily basis.

AVIATION SYSTEM GROWTH

One constant, however, has been system growth. By the year 2000, air travel will nearly double its 1980 level. Just since airline deregulation began in 1978, the number of airline passengers has increased about 73 percent; and we will continue to be confronted with the challenges that growth brings.

What does this growing demand for air travel mean to the FAA? It means retraining our specialized work force to operate, maintain, and support the new technology that we must develop and install. It means expanding airport capacity. It means removing Federal restrictions on local airports' ability to raise revenue and encouraging more public/private projects. It means increasing security to counter the growing threat of terrorism. It means expanding the FAA's inspection force to respond to aging aircraft concerns and, importantly, it means committing significant resources to meet these necessary objectives.

OPERATIONS

For fiscal year 1991, we are seeking an operations appropriation level of $4.1 billion—only a 7 percent increase over fiscal year 1990. The majority of our requested increase—in fact, 6 percent—is needed just to sustain current levels of employment and services. The remaining 1 percent increase recognizes the pressing need for added resources to meet increased demands and allows program growth over fiscal year 1990 to include a 495 employment increase in the air traffic controller workforce, 200 more field maintenance technicians, 300 additional safety inspectors and 170 new security specialists.

We have very little flexibility in our operations appropriation since more than 73 percent of it is made up of payroll costs. Eight out of nine people in our operations work force are in safety related jobs or directly manage those personnel or programs, and the demand placed on them is significant. In fiscal year 1991, each day they will handle more than 176,000 take offs and landings, 132,000 instrument operations, and provide 123,000 flight services; they will conduct 120,000 student weeks of training; they will operate and maintain over 25,000 aviation facilities; they will perform more than 30,000 security inspections and assessments; they will conduct over 5,000 accident prevention seminars and perform almost 300,000 safety inspections of airlines and other aviation activities licensed by the FAA; they will administer our airports certification and grants programs; and they will provide essential support services that facilitate the performance of our critical safety and operational functions.

FACILITIES AND EQUIPMENT

For our fiscal year 1991 facilities and equipment appropriation, we are seeking $2.5 billion. This 45 percent increase over fiscal year 1990, which is needed to fund the acquisition associated with the modernization of our air transportation system and the installations of new technology, clearly reflects the importance of these capital improvements to aviation and the Nation's economy. Major national airspace system (NAS) plan programs targeted for funding in fiscal year 1991 include: a substantial increase for the advanced automation system contract; the voice switching and control system, designed to modernize the system's outdated communications network; terminal Doppler weather radar and long range radar, designed to improve weather services and replace obsolete en-route radar; and the computer resource nucleus project that will allow us to meet our expanded information needs of today and tomorrow.

Appropriation of our full request for the facilities and equipment account is particularly vital in fiscal year 1991 since we are entering the home stretch on implementation of major national airspace system plan projects. In the interim, we need to continue to make short-term improvements in the current system to ensure that demand doesn't outstrip capacity in the short run. We need to continue spending at or near the fiscal year 1991 request level over the next five years if we are going to stay ahead of the steadily increasing demands of the air transportation industry and assure access to all system users. We also must continuously look ahead. And, we are far along in completing the development of a more comprehensive and flexible capital investment plan for the post-NAS plan era. Our schedule calls for publishing that plan this summer.

ACQUISITION SYSTEM REALIGNMENT

At the same time that we are seeking additional funding, it is important that we in the FAA ensure that we are getting the maximum benefit from every dollar spent. Improving the acquisition process to promote greater efficiency and economy from top to bottom has, therefore, been one of my major goals from day one as FAA administrator. In February, I announced a realignment of the agency's acquisition system to deal more efficiently with the increased spending levels needed over the next five years. This realignment establishes an independent capability to oversee the acquisition process; strengthens the program management functions; brings greater focus, discipline, and efficiency into the acquisition process; and enhances the FAA's system design capabilities to include stronger relationships between research and development and facilities and equipment programs. By empowering program managers and holding them accountable, I am confident that the FAA will do a better job of bringing major equipment on line faster and cheaper.

Now I would like to mention briefly our requests in two other very important appropriation accounts: research, engineering and development, and airport grants.

RESEARCH, ENGINEERING AND DEVELOPMENT

Our research, engineering and development programs deal with some of the most sensitive, difficult, and publicly discussed issues of our time—counterterrorism and explosive detection technology, aging aircraft, and air traffic control technology to help us deal with bottlenecks that affect almost a half billion passengers a year. It is clear that more must be done in these critical areas. Therefore, we are requesting $190 million for our research, engineering and development programs, which would provide a 12 percent increase over FY 1990.

AIRPORT GRANTS

Our request for airport grants is $1.5 billion, amounting to a 5.3 percent increase over fiscal year 1990. This amount will fund formula-driven grants for airport development projects at commercial airports, as well as grants to States to improve smaller airports. The request assumes $196 million for capacity, safety, security, and noise projects. This funding will be directed to primary commercial airports and their associated relievers for projects which have a significant effect on our overall national air transportation system capacity. As I indicated earlier, system capacity is a major challenge to us all.

REAUTHORIZATION PROPOSAL

To put these major appropriation requests into context, I want to address how we propose to finance them. As you know, the Secretary submitted our five-year reauthorization bill to Congress on March 19. I believe its speedy enactment this summer is key to meeting the aviation challenges of the 1990's. The bill authorizes higher funding levels in vital program areas and allows a more flexible and dynamic approach in identifying and planning for capital investment needs in an era of rapid growth and change.

PASSENGER FACILITY CHARGE

Perhaps the bill's principal innovation is a provision that would authorize local airports to collect a passenger facility charge (PFC), or "head tax," of up to $3 per passenger. This would pave the way for local governments to respond more effectively to capacity constraints. We estimate the PFC's which are common in some 138 foreign countries—could generate as much as $1 billion annually at United States airports. Airport needs continue to grow. Removing the Federal barrier to local passenger fees would help finance those needs.

TRUST FUND

The bill also calls for an increase in the amount of the FAA's total budget funded out of the trust fund from the current level of about 57 percent to a level of 85 percent, and would finance this through increased user fees. This is consistent with a series of cost allocation studies, including one by the Congressional Budget Office, which show that 85 percent of our costs can be directly attributed to specific users. Since 1982, the trust fund has financed only about 57 percent of the FAA's budget. During this time period, the trust fund has funded only about 24 percent of the cost to operate and maintain the aviation system. We think that the operation of the modernized aviation system is just as important as the purchase and installation of new equipment. After all, the users of the system would receive no benefit from the installation of new technology if that technology is not certified, maintained, and operated for their use. Taxpayers should pay for the 15 percent usage attributable to military and other public users. Our proposal is based on the premise that those who directly benefit from aviation services have a responsibility for paying for the cost of those services. This does not mean, as some allege, that we do not believe that aviation benefits society as a whole. Clearly, it does—aviation produces immense benefits. But public benefit does not equate to public subsidy. Our proposal, therefore, places responsibility for funding FAA activities on those who directly use them and benefit from them.

In closing, Mr. Chairman, I want to recognize the contribution which you and the members of the subcommittee have made to the safety and efficiency of our air transportation system. I look forward to working closely with the members of the subcommittee and urge the subcommittee to act favorably on the FAA's appropriation request for fiscal year 1991. The amounts we are requesting are absolutely necessary for the FAA to fulfill its significant safety responsibilities on behalf of the American traveling public.

This concludes my prepared statement. I will be pleased to respond to any questions you may have. Thank you.

PASSENGER ENPLANEMENTS

Senator LAUTENBERG. I am just curious about one thing. I thank you for that excellent statement, Admiral. How many passenger enplanements are there domestically each year?

Mr. BUSEY. If memory serves me correctly, approximately 420 million enplanements domestically and an additional approximate 30 million that travel internationally for a total of about 450 million.

PASSENGER FACILITY CHARGES

Senator **Lautenberg**. And it is estimated that if we had the PFC's that they would raise—I think you used the figure $1 billion, but that is a conservative number if we take the number of enplanements at each of the airports. I am not sure. Is that an option with the individual airport or is it a charge that is imposed on all passenger enplanements that just reverts back to the airport from which they travel?

Mr. **Busey**. Sir, we envision that option being available to local airports to generate a charge up to $3 per passenger passing through the airport. Those funds would remain at the local airport under local airport control to be used for local projects similar to those that we presently approve for AIP grant purposes.

Senator **Lautenberg**. Specifically designed to help either modernize or expand the airport's capacity?

Mr. **Busey**. Yes, sir; and we estimate—the $1 billion I mentioned—is based on our assumption that the top 50 airports, the busiest airports, would probably find this the most attractive option.

TRUST FUND BALANCE

Senator **Lautenberg**. I have heard that already from many of the operators, and that sounds like it is a good way to get funds in local management, who recognizes the problems right there and gets on with solving them with a reliable source of funding.

I am concerned, Admiral, that this subcommittee would come under some fairly severe criticism if it did not provide all that is requested by FAA and thereby contributing to the large balance in the aviation trust fund. There is nearly $6 billion that is yet unobligated. However, the FAA has over $1 billion in available deferred funds, and plus it faces delays in a number of its major contracts. How do you answer the critics who assert that the aviation trust fund ought to be moved off budget, which would speed up spending from this fund?

Mr. **Busey**. The balance of unobligated funds that you refer to, sir, is really based on our full funding policy where we come forward and ask for funding for the full life of the program. As you know, over the last several years we have moved some of the major programs off of full funding, but the balance is there because the funds, when they are appropriated, are obligated rather slowly in the first 1 or 2 years, and then the obligations pick up as we get into production and the exercise of production options for delivery of the systems.

So those dollars that you refer to are committed to specific programs based on our budget justification and the appropriations that have been granted in prior years. They will be obligated, and my observation is that we are beginning to increase the rate of obligating the funds that we are requesting appropriations for.

Senator **Lautenberg**. So the surplus is temporary at best?

Mr. **Busey**. Yes, sir.

Senator **Lautenberg**. And I think it is important to make sure that the record reflects that, because there is a general view that we have these funds and do not use them. They just sit there and gather interest. In fact, these funds are committed, and if we did nothing more in a very few years, they would be wiped out, whatever the spending cycle is.

Mr. Busey. Yes, sir.

Senator Lautenberg. Senator Kasten, do you wish to jump in and make an opening statement?

STATEMENT OF SENATOR KASTEN

Senator Kasten. Yes, Mr. Chairman, thank you, and I appreciate your allowing me to interrupt you for a moment because I am not going to be able to be here because of other commitments this morning. I want to first of all, Mr. Chairman, say that I do look forward to working with Admiral Busey, and I think he is doing a commendable job at the FAA, even with the continuing challenges that we all recognize.

GAO REPORT

And I would like to particularly, Admiral, thank you for the assistance that the FAA has been to provide in several instances in Wisconsin, two in particular, the Outagamie Airport and the Twin Counties Airport serving Marionette that you and your people have been very helpful to us, and I appreciate that. I look forward to reviewing today's testimony along with some questions that I am going to submit for the record, because I think that today's testimony and today's hearing is going to be important in working through and explaining the continuing criticism of the FAA which we heard from Mr. Mead and Ms. Hecker of the GAO last week.

They talk about the continuing delays in implementing the air traffic control system and the failure to adequately identify the human resource requirements, continuing shortfalls in various staffing goals, et cetera. I know you are familiar with that report. I think, frankly, that there is an awful lot of good that you have got to say and your people have been working well. We have got to balance your testimony today, and the information that we are going to be receiving from you, against some of the testimony that we are seeing from GAO as we work in this committee through a number of tough decisions.

And we want to work to fund you, and I am going to be working with the chairman, and I know the ranking member, Senator D'Amato, in trying to make sure that you have the very important funds that you need.

PREPARED STATEMENT

So, Mr. Chairman, I ask unanimous consent that the remainder of my statement appear in the record as if read. But I thank you and I look forward to continuing to working with you and your team at the FAA.

[The statement follows:]

Statement of Senator Kasten

Mr. Chairman, I look forward to the testimony today from Admiral Busey. I think he is doing a commendable job at the FAA, even with the continuing challenges that we all recognize. Before going into some of those challenges, I wish to thank

Admiral Busey for the assistance the FAA has been able to provide in several instances affecting the State of Wisconsin—Outagamie Airport and Twin-Counties Airport serving Marionette.

Admiral Busey's testimony will also be important in explaining the continuing criticism of the FAA which we heard from Mr. Mead and Ms. Hecker of the GAO last week. They cite continuing delays in implementing the air traffic control [ATC] system, failure to adequately identify the human resource requirements, and continuing shortfalls in various staffing goals (including 1900 shortfall in experienced controllers).

I will be interested in the FAA's view of the current status in implementing the NAS Plan. There is such a difference of opinion relative to current status and ultimate cost for this comprehensive modernization program that has suffered cost and schedule setbacks. The GAO believes the program could cost $27 billion by the year 2000, FAA says far less.

Finally, the request of the Administration seeks to raise aviation ticket, fuel and other taxes to put more money into a trust fund that isn't being spent down now. I do not think this makes sense. I am willing to consider the implementation of the passenger facility charge [PFC] concept allowing local airports to raise up to $3 per passenger, with appropriate safeguards that it in fact be used for capacity enhancing projects. This would be voluntary with the airports, but for example, Milwaukee could end up with $3.3 million more than they would get under their current entitlement.

There are a lot of challenges, and just plain problems, at the FAA as we look at the future. But I compliment Admiral Busey for his efforts and feel that the FAA is capable of meeting these challenges.

ADDITIONAL PREPARED STATEMENT

Mr. Busey. Thank you, Senator Kasten.

Senator Lautenberg. We thank Senator Kasten. He has been a very interested and active member of the Transportation Subcommittee. We value his input, and we understand other time commitments, and we will see that all of the things that you want placed in the record, including the processing of the questions, will be taken care of.

Also at this time, I will submit the ranking minority member, Senator D'Amato's statement for the record. Due to other commitments, he was not able to remain.

[The statement follows:]

Statement of Senator D'Amato

Mr. Chairman, I join you in welcoming today's witnesses from the Federal Aviation Administration. Administrator James Busey is here along with his top staff. The FAA's budget request is for a total of $8.3 billion—a $1.2 billion (16 percent) increase. In light of the tremendous demands for transportation funds, this subcommittee will need to take a close look at this request.

In the early 1980's the FAA undertook an ambitious program—the National Airspace System Plan (NAS Plan)—to modernize our nation's airspace. Original cost projections of $12 billion have now grown to at least $27 billion. Just some of the NAS problems we have seen have been contractor delays in developing complex software, unrealistic FAA production schedules, and FAA's problems with phase-in of new systems. As a result, FAA has consistently revised upwards the cost of this program.

Last week, the General Accounting Office testified before us and raised some questions about FAA's ability to carry out its ambitious modernization program. We will discuss GAO's criticisms today. Obviously FAA must have the funds it needs to accommodate the huge increases in air travel, however FAA now has $6.6 billion in *unobligated* balances, with $2.3 billion of it in facilities and equipment ($1.2 billion of this sum was deferred). This large unobligated amount makes me wonder if FAA has carefully scrubbed its request for a $779 million increase (+45 percent) in facilities and equipment.

Our challenge of funding Amtrak, transit, highways, Coast Guard, and FAA in a year when we cannot count on a transfer of Defense funds for Coast Guard, is enormous. I will be working shoulder to shoulder with Chairman Lautenberg to try to meet our Nation's pressing transportation needs.

Thank you, Mr. Chairman.

NAS PLAN PROCUREMENT

Senator LAUTENBERG. Admiral Busey, to continue talking about the trust fund, I described to you the credibility gap that we have because so many of the projects have fallen so far behind both chronologically and financially. What assurances can we give people? What assurances can we give colleagues in the Senate that these funds are going to be used in a timely and effective manner?

Now, again, to use an expression with which you are very familiar, it was not your watch, but that does not permit any of us to escape the responsibility of living with a record that has been acquired in the past. So what do we do about assuring people that we are going to be using this money in an appropriate way?

Mr. BUSEY. Well, Mr. Chairman, as you point out, it is my watch now, and I feel the responsibility very heavily. I have spent a lot of time in the last 9-plus months that I have been aboard looking specifically at the projects that we are involved in procuring.

Among the many things that I have done is recognize that my confusion with the original NAS plan, the brown book with the yellow cover with the white pages and the blue pages in it was clearly confusing. We are taking steps to try to simplify that to separately identify the original 90 programs and the NAS plan that was started almost 10 years ago. It had an original estimate of about $12.5 billion cost to complete with some overoptimistic estimates on schedules and completion dates.

We have focused a lot of attention to try to identify all the known delays, the known situations that would potentially lead to continuing delays. I believe that the FAA has done a very creditable job as I look back in history over the last 10 years of moving to bring on this new technology. Budget estimates were made trying to estimate the cost of new technology that was going to be brought into production without the benefit of a lot of knowledge that we have now.

We have tried to zero in on those original 90 programs, identify and publicize the potential future delays, zero in on the cost estimates, near-term cost estimates, and I believe we have done that. I have made some organizational changes, and the realignment that I announced in February is based in part from reading all the previous GAO criticisms. By having an open door with Mr. Mead, recognizing that his GAO team is not being paid to give us platitudes that will improve communication about our programs. They are being paid to identify weaknesses that we have in the system.

NAS PLAN PROCUREMENT IMPROVEMENTS

I agree with better than 90 percent of their criticisms, their findings. We are taking steps to do such things as put more discipline into our procurement system. I brought in a new executive director with senior program management experience. I have him in place with a very small staff designed to help me discipline the system.

He reports directly to me. He has broad policy guidance authority across the organization.

We are removing layers of filtering mechanisms that I feel existed between the program managers and top level management. We are empowering program managers, giving them the authority, the responsibility, and holding them accountable for program decisions that they make alone, giving them matrix management support, legal support, contract support, et cetera.

We are intensifying and creating a true independent operational test and evaluation facility. For example, I have held off on making the decision concerning awarding the contract in the competition for the voice switching and control system until I am satisfied that all of the testing up front is completed, that we know everything about the weaknesses in the system, whether it is going to be fully capable of meeting the performance specs that we have laid out.

By explaining to you how we can improve the credibility of our operations, we are doing a lot of things to accentuate visibility on procurement.

PASSENGER FACILITY CHARGE

Senator LAUTENBERG. It sounds like you are doing the right things, but I have to say this to you. You describe a credible job being done by the FAA in the past, and I do not doubt that individual FAA managers and staff did a credible job. They are very hardworking people. These are not easy jobs to either fill, train for, or retain. We have that problem throughout government.

But somebody slipped, something slipped, Admiral. We are in a situation where we have hardware in storage where we do not have the systems integration up to date, software still lagging. I mean, something is screwed up, and I do not know who or what.

And I will tell you this: The fact that you have put a number of steps into place to correct the situation does not get you instant believability. And it is very tough when we talk about the funding to say, "Listen, this is a man who has a distinguished record. We trust him. Notwithstanding the fact that he is new in this particular job, he brings with him an excellent reputation. Let us just give him the ball and let him run with it." Too many skeptics around here. By the way, I am one of them. It is not a personal thing at all.

We have had excessive turnover in management because if this were a company that I was running, obviously some changes would be made, but I also would not be turning over the top manager every year or every couple of years. We would try to leave him in place. That has been a pet peeve of mine and many of the people in the audience have heard it. I really think that the administrator belongs in the job as long as he or she does the job and it should not have anything to do with who sits downtown on Pennsylvania Avenue. We ought to try to have the FAA operate like any other professional organization with someone appointed by a board that is perhaps changed over as administrations change, but with never the opportunity for one to dominate.

Anyway, enough of the philosophy. Let us get on with what we have to do.

One of the programs funded out of the trust fund is the Airport Improvement Program, and that is the basic grant program for airports. Yet you are saying that what we ought to do with the largest airports is rely on the PFC's exclusively for their funding. Is that enough of a resource for them? Why do we want to make that kind of a change? If that was described as an additional, more direct, more prompt resource then I think we would see it differently.

Mr. BUSEY. Well, the larger airports, as you know, Mr. Chairman, receive entitlement from funds annually based on the passenger flow through that airport. And what we are proposing is the opportunity for airport operators to generate a new funding stream through the passenger facility charge [PFC] and then give up a portion or all of their entitlement funds, 50 cents on the dollar for every dollar that they collect in PFC's up to the total apportionment of their full entitlement grant.

The opportunity for increased capital and increased funding stream for airports to leverage on the bond markets is increased through the PFC's. The dollars they give up, that is the 50 cents on the dollar of entitlement grants they would give up as they use PFC's, would then revert back to the discretionary funds to enable us in the FAA to reach more smaller airports that we cannot reach today and also to apply those dollars toward capacity improvement programs at specific airports to speed up improvements.

PENALTY PROVISION

Senator LAUTENBERG. Right. But the smaller, medium-sized airports have no assurance. I mean, if you take an airport that is in a relatively quiet area, that $3 a head is not going to get them a lot, and they are not going to be able to make significant improvements with those funds. I mean, if they get 10,000 enplanements a year or 20,000 enplanements a year, that does not provide a lot of concrete, does not provide a lot of buildings. So, I do not know what we would do to help them along except, as you just suggested, perhaps out of the discretionary fund. The PFC's are intended almost exclusively as a substitute even though there is a 1:2 ratio or penalty. What was the purpose of the penalty provision?

Mr. BUSEY. The penalty provision in the trust fund?

Senator LAUTENBERG. Yes.

Mr. BUSEY. Or in the appropriations? The penalty provision, as I understand it, sir, was really to——

Senator LAUTENBERG. The one that relates to operations.

Mr. BUSEY. Yes; this provision penalizes FAA from the standpoint of denying funding from the trust funds for the operations of the FAA. For every dollar difference between the funds authorized for the capital programs—F&E, AIP, and RE&D—and the funds ultimately appropriated for these programs, funding from the trust fund for operations must be reduced by $2.50.

I think it is penalizing the system. It is, of course, what is driving us to the point where only 24 percent, approximately, of our operations have been funded over the last several years into the operations account, and that is why we believe so strongly that we would like to see that penalty provision removed.

AIRCRAFT NOISE—COMPUTER MODELING

Senator Lautenberg. I want to talk for a moment about aircraft noise. It is my understanding that FAA has the capacity through computer modeling to project the onground noise impacts due to overflying aircraft. Does the FAA do computer modeling prior to implementing significant air route changes or before implementing new route authorizations?

Mr. Busey. We do, sir. We spend a lot of time working with headquarters and in the regions as we draft out new arrival routes and departure routes, as we modernize radar systems. We spend a lot of time doing that, working with appropriate communities.

MODELING IN ADVANCE OF ROUTE CHANGES

Senator Lautenberg. But is it done in advance before route changes or new routes are approved?

Mr. Busey. Both before new routes are established and changes.

Senator Lautenberg. In each case someone in FAA confirms the fact that there will be very little or no noise impact. Mr. McDaniel, did you want to say something?

Mr. McDaniel. Yes.

Mr. Busey. Would you like to help here.

Mr. McDaniel. Yes; I would be happy to. Good morning, Mr. Chairman.

For significant route changes and major adjustments there are specific procedures to be followed in the FAA regulations about environmental assessments and when those are required. I think historically we have not always applied the tools that we have available to us in advance of implementing significant changes. We are working out new procedures. In fact, we have just utilized those in Seattle working with the Seattle community looking at changes in procedures to anticipate in advance what the noise impact would be.

COMPUTER MODEL RELIABILITY

Senator Lautenberg. How reliable might this modeling be? Nothing substitutes for listening with the various devices that are in place. But once that starts——

Mr. McDaniel. We believe that it is quite reliable. It has been developed now over a period of years. We continue to improve it. One of the things we do after we do modeling is from time to time go into the field and actually take measurements to see if they comport to what has been projected, and it has turned to be a useful and quite accurate tool.

COMPUTER MODELING—PAST PRACTICE

Senator Lautenberg. It is fair to say, then, that now you always have a simulation run before you change a route, but that in the past that was not the practice?

Mr. Busey. That is true.

Mr. McDaniel. Yes; in the past that has not been the practice. And for small changes in the future, that will not be the practice. There are thousands of route and procedural changes that are made on an annual basis and for each one of those we will not do an evaluation. But for significant ones, we will do an advance evaluation.

Senator LAUTENBERG. Can anyone explain to me why this modeling was not done before? Was it just that the magnitude of the problem was not anticipated?

Mr. MCDANIEL. I think that is accurate.

Mr. BUSEY. And I think it is fair to say, Mr. Chairman, that the agency is certainly much more sensitized in the last couple of years——

Senator LAUTENBERG. So are the Senators and Congressmen.

Mr. BUSEY. Yes, sir; so we are continuously searching for new ways to model, to communicate with the affected civilian population, to educate, to discuss before we make rule changes—or route changes—because we have had simply too many instances where we have made changes without adequately considering all of the ramifications.

PLANNED MAJOR ROUTE CHANGES

Senator LAUTENBERG. Yes; and that is, of course, aggravated by the volume of traffic, by the late night traffic—and the fact that when you make a change it is so apparent, and we hear about it, and people have a right to protest and have a right to demand something else.

What major changes similar in size and scope to the expanded east coast plan are either being planned or looking for implementation?

Mr. BUSEY. Before I turn it over to Bill Pollard, let me indicate that the significant changes we have underway that we are involved in these last several months are airspace changes in the Dallas-Fort Worth area, the Los Angeles Basin area, the Chicago area, and, Bill, you may be able to answer more on others.

Mr. POLLARD. Well, sir, to answer the first question, we have nothing in that scope planned, nothing on the books the size of the east coast plan. As the Administrator said, we have several much smaller efforts going on working with the communities. We recently had assembled change in procedures in Seattle that was like a 2- or 3-month process to make sure that all the concern was heard as it related to the change in the tracks and the noise that would be generated, but nothing the size of the east coast plan.

Probably our largest effort is going back now working with the users, users both being the flying public and the public on the ground trying to enhance some of the routes in your area and other areas on the eastern seaboard.

AIRSPACE CHANGE PROCEDURES

Senator LAUTENBERG. One of the criticisms that came about as a result of the implementation of the east coast plan was the fact that public participation was not really invited in the appropriate way, there was almost no warning that this change was coming, we did not have an environmental impact statement, and the use of the 65-decibel level as a measure of acceptable noise. Each one of these was a significant part of the problem.

Based on the experience of the EECP, has the FAA made changes in the procedures that would lead to implementing new changes?

Mr. BUSEY. Yes; I think it is fair to say we have, and a recent example of that, I think, is the process that we went through in Seattle, and Dale, do you want to talk step-by-step about that process?

Mr. MCDANIEL. In the case of Seattle, Mr. Chairman, we did use the model that you referred to to look at potential noise impacts on the community.

Senator LAUTENBERG. That was one part of it?

Mr. MCDANIEL. Yes.

Senator LAUTENBERG. That was the beginning? OK.

Mr. MCDANIEL. Second, we worked with the community in terms of identifying alternatives and what those impacts would be, so there was a very open, ongoing process which took more than a year——

Senator LAUTENBERG. Public meetings?

Mr. MCDANIEL. There was advance notice, there was participation by the airlines, by the community, by the airport sponsors, so everything that we were considering doing——

Senator LAUTENBERG. Is Seattle a good model with its commitment to aviation? They would probably suffer a lot there before they would say no to something.

Mr. MCDANIEL. They are not any more reluctant to complain when they are impacted by noise than people in communities around the country. They speak out, and they make their concerns known. Those were factored into the process and into the evaluation.

The use of the contour, the 65 LDN contour, we continue to find to be an effective yardstick to use. It does not indicate every complaint that will arise, but it is an effective dividing line for assuring compatible land use. We know, as a practical matter, we will never make all residents happy. There would always be a complaint at some level that—unfortunately, there may not be anything we can do about the last complaint, but in this case we believe it is an effective tool.

So putting all of these together, we were able to devise a plan which not only improved their traffic procedures, reduced delays, but also reduced noise impact on the community, and I think the community when that is implemented will be quite satisfied with the result.

Mr. BUSEY. We are in a similar process at Dallas-Fort Worth, Mr. Chairman. We have met in Washington with local mayors of cities impacted around the airport as the plan goes forward to add new runways, to significantly increase capacity at Dallas-Fort Worth—public hearings, educational sessions, et cetera.

ACCEPTABLE NOISE LEVEL

Senator LAUTENBERG. How do you determine that the 65-decibel, LDN level, is an acceptable one? Did we ever test it on real, live human beings who have to sleep at night?

Mr. **McDaniel**. Well, in fact that is where the measure was derived from. It is what is called a DNL, or day/night loudness measure, which takes the total noise energy during a 24-hour period and uses that as a yardstick.

The measure itself was derived from a large number—hundreds of actual onsite measurements in communities which attempted to correlate, as the Congress directed, a measure which is related to what actual complaints and annoyance in the community is, so that is one of the fundamental measures.

It should measure annoyance in the community, and there is a reasonably good fit between the measure that we use and community annoyance—65 LDN—and the curve is one which goes from zero to 100 percent of how many people would be annoyed with a given noise level. At 65 LDN approximately 15 percent of the community would be annoyed, and of those some 3 to 4 percent might actually be active complainers. That dividing line was picked after deliberation with the CEQ, the EPA, Housing and Urban Development, VA Administration, Department of Defense, as an appropriate dividing line between compatible and noncompatible land use.

There are a number of things which can be done to residences to soundproof them and make them more livable, and guidelines are available.

NOISE FIELD TESTING

Senator **Lautenberg**. That is really asking an awful lot of a homeowner, to just tell them to add a couple of thousand dollars' worth of repairs here and there and put some insulation in, put a big tent over their house and all that, why, it will suddenly be liveable.

My concern, Mr. McDaniel, is, we have seen lots of things modeled in a computer laboratory, and go out and find out that they do not fly—to use the expression. You had a 15-percent community negative response and you define a smaller percentage of that as complaining, not identifying them as complainers but rather bothered—truly bothered.

Just to help me through this, have these experiments, these models, been done in the field, did I understand you to confirm?

Mr. **McDaniel**. Yes; that is correct. They are based on actual field experience. That is how the curve was originally derived.

STAGE 2 AIRCRAFT

Senator **Lautenberg**. I see.

How about the FAA's view—Admiral, you and I discussed this briefly yesterday in our little get-together—on stage 2 aircraft? Does FAA favor a mandated phaseout? Should a phaseout be a Federal mandate, or should local government airport operators be given the authority, or even the encouragement, to enact a ban on stage 2?

Mr. **Busey**. I believe, Mr. Chairman, that we need a national noise policy which addresses the phaseout in a detailed way of stage 2 aircraft and moving toward stage 3 aircraft. The European Community is beginning to talk about that. I am concerned that they will arrive at a definitive phaseout schedule while we are still relying on local communities to establish their own noise restrictions and prohibitions—night-time prohibitions, for example, of stage 2 aircraft.

We have some 400-plus local noise activities underway across the Nation now. I am concerned about the impacts that may have on our overall system of interstate commerce, that it may affect the service to many communities, so I think we need to approach, through a national debate, education of the public, allowing for public comment.

We need to approach a national noise policy that will lead to specific phaseout dates for stage 2 aircraft in view of the economics involved, the capability of the manufacturers to produce quieter stage 3 aircraft and the ability to hushkit current stage 2 aircraft.

HUSHKITS

Senator LAUTENBERG. Why could not something like the modification—the hushkit that you talk about—be mandated? Would that be too severe a penalty? We learned yesterday that that does not affect the ability to operate the aircraft, and in fact it may even bring a degree of efficiency to it. Why is there not a heavier hand by the FAA or the Government in this, because it is such a stressful condition that we impose on the community?

Admiral BUSEY. Well, of course, we have been involved. We have to certify the development and the installation of hushkits on stage 2 aircraft. The state-of-the-art technology is just coming along now to where we have commercially viable hushkitting capability.

Some of the cargo carriers and the package carriers are beginning to make significant investments in hushkitting so that their fleet of aircraft can continue to be used on into the future, so we definitely are involved there, and as that capability comes along, we expect to be able to certify more of those kinds of installations to move a stage 2 aircraft into the stage 3 quietness area.

But we need to also address, sir, if I might—we need to also address zoning, because many of the impacts that we are suffering now around airports—Dallas-Fort Worth is a good example. It was an open field 18 years ago, an open area, and because of continuing development, building in an unrestricted way, we now have a situation where that airport has an impact. Had we had some discipline in the zoning we would not now have to be making Federal investments in soundproofing houses, in buying up houses in noise-impacted areas or in guaranteeing the value of homes that have built up around noise-impacted areas.

ZONING

Senator LAUTENBERG. What you are saying—and it sounds logical—is that if an operating pattern for the airport was there before the building took place, that the communities have to take that into account, because everybody likes an airport nearby except when you have to listen to it. It is a nice convenience to have Washington National so close. It is a wonderful convenience for me to have Newark so close, but I can tell you, you pay a price for that.

Mr. BUSEY. Yes, sir.

AIRCRAFT NOISE IN NEW JERSEY

Senator LAUTENBERG. I was reminded by Pat, our senior clerk here, that the people in New Jersey probably wound up, without realizing it, as laboratory subjects in terms of the change in pattern and the noise levels that they had to endure. Was that by design?

Mr. McDANIEL. That was entirely unintentional, Mr. Chairman. We did not anticipate in advance that this would happen, nor did we anticipate that we would be using those to find out what kind of reaction we would get.

NATIONAL TRANSPORTATION POLICY

Senator LAUTENBERG. I hope that the people in the community know that we have your commitment to try to straighten this out in significant fashion as quickly as possible. I urge you to move on with the changes that need to be taken.

One criticism of the national transportation policy that has been introduced is that it failed to even really talk about aircraft noise, and likewise the administration's legislation to reauthorize FAA programs does not address noise in a comprehensive way.

Can you think of any reason why this new policy or the reauthorization proposal does not address the noise problem?

Mr. BUSEY. Mr. Chairman, the national transportation policy does address noise. It does address the issues that I mentioned, the creation of a national policy moving toward that which directs specifically the phaseout of stage 2 aircraft and moving toward an all stage 3 aircraft. It does mention the zoning issue that I brought up. It does address educating the public to realize that as the demand for air transportation increases, as the number of aircraft in our system increases, noise is bound to increase. We cannot make it go away.

We, the FAA, participated very heavily in the development of the national transportation policy. We are urging inclusion of addressing the issue of aviation noise, and I feel very comfortable with the guidance that is in that overarching policy from the Secretary of Transportation. What we are moving toward now is using that general guidance that addresses noise to, in turn, develop more specific guidance.

I want to have public hearings. I want to get involved in educating the public, getting the industry involved and move toward addressing specifically with local communities the issue of zoning, move toward the evolution of a definitive plan that will require the phasing out of stage 2 aircraft.

ENVIRONMENTAL IMPACT STATEMENTS

Senator LAUTENBERG. I sense, Mr. Administrator, that we are discussing the "why it happens" rather than more specifically how we address it and how we accommodate the increased volumes. Sure, zoning is a problem. We recognize that. The fact is that you have a lot of equipment out there that was built without noise in mind, fairly efficient equipment, fairly durable equipment, likely to last another 10-plus years, I guess, looking at the 727.

I did not get from my review of it a commitment to say this is how we intend to reduce the noise factor but, rather, we are identifying the problems. I would hope that it gets a more stringent focus.

There have been several bills related to the expanded east coast plan aircraft noise problems that have been introduced in the House. Among other things, the bill would require environmental impact statements for proposed route changes and for the EECP.

Do you want to tell me what the position is on these proposals and if the EPA should be brought into the process of evaluation?

Mr. McDaniel. Mr. Chairman, I would have to look at the provisions of each of the bills to comment specifically; but in general I would say we believe the procedures which we are implementing following the expanded east coast plan experience that we implemented in Seattle is responsive to the things that we have learned and that route and altitude changes, as I mentioned, occurring in the hundreds or even thousands a year are beyond our ability to deal with in each individual case; but we are developing tools that we talked about to single out those most significant cases. We are putting those into place, and we believe that is responsive and would take the place of the intention of the bills.

AIRCRAFT NOISE AROUND EUROPEAN AIRPORTS

Senator Lautenberg. Can you give me a short take on a question that occurs to me; that is, what happens with the major European airports vis-a-vis noise? I think of De Gaulle and other airports. They seem to be more isolated than our airports. I am trying to get a picture in my mind. It does not seem that they allow the building up to the airport boundaries so much. That is just a quick impression, I know, and Frankfurt is a pretty busy area, fairly densely populated.

Do they have the same problems; again, in a relatively short form, please?

Mr. Busey. I think they have the same problems, but we have different situations in Europe. In my recent experience of having lived there, there are major airports in Europe that are out on the fringes of large cities, but we also have major airports that are in the center of large cities.

The airports across Western Europe are to a greater or lesser degree, depending on which country you want to zero in on, are controlled by governmental authorities. The ability or the willingness of those governments to pay attention to complaints that may come from civilian populations are entirely different than ours in our free and open democratic society. So my observations are in many of those cases the noise problem just does not become an issue because it may be ignored, but I think in some of the more forward European countries they are beginning to deal with noise on the same basis as we are.

Senator Lautenberg. Are they any better at it than we?

Mr. McDaniel. I think they are learning very much at the same rate as we are. Their percentage of stage 2 aircraft in the fleet is approximately the same as ours. They receive a large number of complaints. It is one of their major limitations with regard to development of their own systems. We are working closely with them to try to make our programs compatible with the things that they are thinking about. We are learning from them, and I think they are learning from us.

Mr. BUSEY. Of course, we are working through ICAO, also. We have aviation in common in 160-plus nations, but it is difficult to work noise issues through ICAO when we have developing nations that want to buy used stage 2 aircraft and operate them.

AIR TRAFFIC CONTROLLER STAFFING LEVELS

Senator LAUTENBERG. I do not have a lot of confidence in ICAO to get to an issue like this that is relatively minor on the scale of things we talk about like terrorism and the other really urgent concerns. It is like plowing through a mud field there. The pace is very slow.

I want to talk for a moment about the air traffic controller work force. In its report, "Aviation Safety, Facility Ranking of Controller Survey Responses," issued November 21, 1989, GAO found that controllers are stressed, troubled by working conditions at the facilities, and that the extent of their concern varies among facilities and on the basis of specific working conditions.

Moreover, the Secretary of Transportation requested a waiver from the statutory requirements that by the end of fiscal year 1990 FAA must attain an overall controller work force of 17,495, of which 12,725 must be FPL controllers. While meeting the full performance level has consistently been a problem for FAA to meet, it had met until now the overall controller work force.

We are, as you know, short a significant number. It looks to be about 400 at this point. Now why does FAA believe that it cannot meet its overall controller work force for 1990 and for 1991? Why cannot it meet these levels?

Mr. BUSEY. There are several issues, Mr. Chairman. Let me try to address them. I made that decision to not continue our growth toward 17,495 this fiscal year. At present we are at about 17,206 or 17,209. I decided not to continue the growth this fiscal year toward the 17,495 because of several situations: affordability; the dollar flexibility that I had; our ability to train toward FPL status; our misallocation of people at some key locations; and also the interim sector suite system delivery slippages that I am sure we will discuss in more detail later.

Specifically, the Interim Sector Suite System Program has sustained better than a 1-year delay which enabled me to decide not to expand staffing because part of that 495 growth for this fiscal year included growing the work force so that we will have controllers on board to be ready for the integration of the interim sector suites. I think there were about 145 controllers requested for that.

I decided I needed to spend the dollars that I had available to me from a flexibility standpoint to move controllers from low workload conditions into the heretofore very difficult to fill positions that are now aided by the 20-percent cost-of-living bonus that the Congress supported us on last year.

I wanted to use the money to move controllers into facilities this year.

Also, we had lower aircraft activity last fiscal year because of the Eastern strike and other indicators. So I felt that I could slow the growth, move people from lower workload positions into the hard-to-staff locations, and then we will continue the growth to 17,495 by the end of next fiscal year.

So it was a management decision based on the dollars that I had available.

SAFETY IMPLICATIONS

Senator **Lautenberg**. Mr. Administrator, I want to be clear about this because we are talking about not only the efficiency of this safety but the safety of the public.

Your statement says that we do not need that many now because we cannot make this an economic decision. There are other things I am sure that we could do to save money if we felt that this was that important. You are saying that the 17,495 number is not one that is a necessary target to meet, despite the projected growth in aviation, despite the fact that the turnover in the early phases of training is something that is very difficult; the fact that we are not as competitive as we would like to be.

You do not feel that you need any kind of a buffer in there, including the achievement of the 17,495 goal, to maintain the system? I have to remind you of this, Admiral. In addition to the shortage of controllers, we apparently have a dispute. Our numbers say 400. You say you are only down 200. We have inspectors; we have maintenance technicians. In each case, there is a shortage of about 300 in each of those categories.

Now I think it is very important that the record reflect that your view is, if I understand you correctly, that those levels are not the necessary levels to achieve and that, in fact, the system can be operated with significantly less, about somewhere around 1,000 people less.

Mr. **Busey**. Sir, my judgment call for this fiscal year was that our target could safely be 17,000 total instead of the 17,495 that was projected for the current fiscal year. I felt that, again, because of reduced traffic experience that we had had, because of the delays in the new equipment that was part of our justification for increasing some of the work force, and I felt that I had a misdistribution of controllers throughout the system. I needed to move experienced people into the high-density/high-capacity areas that were impacted by the benefit of the new pay demo project.

It was only for this fiscal year. I intend to continue the growth of the controller work force up to our staffing standards in the next fiscal year, and in subsequent fiscal years I intend to continue that growth. I felt that because of my need to address technical people, we have ignored asking for additional airways facility technical people in past years. We are trying to build the inspector work force to accommodate the increased workload that we have there as aircraft continue to be added to the fleet. So it was strictly a judgment call based on the 1 year, and I intend to continue that growth of the controller work force in the future.

AIR TRAFFIC CONTROLLER STAFFING REQUIREMENTS

Senator **Lautenberg**. What is the projection for this next fiscal year? At yearend, where do you want to be?

Mr. **Busey**. I want to be at 17,495 in total work force. I intended to be not less than 17,000 at the end of this fiscal year, and our data as of the end of March is 17,209.

Senator **Lautenberg**. Let us be sure that I am making no errors here and that you are not.

The Secretary of Transportation requested a waiver from the 17,495 figure. So what I hear is that for whatever reason that now has slipped by a year and that the goal that we have for fiscal year 1990 is now the goal for 1991.

Mr. **Busey**. Yes, sir; if memory serves——

Senator **Lautenberg**. The system suffers not at all as a result of that?

Mr. **Busey**. That is correct. I do not believe that it was the Secretary of Transportation that requested a waiver. It was a letter of information that I provided to the Congress, sir, and I indicated that depending on what we saw happen in this very volatile work force through the year we would consider the Secretary coming in with the statutorily required waiver.

So I do not believe that we have yet submitted that, sir.

AIR TRAFFIC CONTROLLER STAFFING AT HIGH-DENSITY AIRPORTS

Senator **Lautenberg**. How about the population at the high-density airports in the towers, the controller work force? Is that where you want it to be?

Mr. **Busey**. No, sir; it is not where I would like it to be. I would like to see full 100 percent manning in accordance with our staffing standards. I would like to see everyone there——

Senator **Lautenberg**. Well, not what you would like to see, Admiral. What, in your view, do we need now in terms of a complement that is not comfortable, but adequate to work with? Do we have that at the high-density airports?

Mr. **Busey**. Yes, sir; I think that we have today an adequate number of full performance level, operationally qualified controllers and new controllers in the high-density areas, and the pay demonstration project is beginning to indicate that it is working to help us attract more experienced controllers into those previously hard to fill areas.

I might let Mr. Pollard fill in a little more detail from his perspective.

Mr. **Pollard**. Well, sir, I think we certainly have enough authorized positions. We still have great difficulty, and the pay demonstration is helping to fill in those positions, particularly in the New York, Los Angeles, and San Francisco areas. Those are probably our most difficult, followed by Chicago.

We do have adequate staff there to operate those facilities. We have more than enough positions. It is attracting people to actually want to go to those locations at this time.

GAO REPORT—BEST AND WORST FACILITIES

Senator **Lautenberg**. The question here, has FAA examined GAO's list of the most negative and most favorable facilities? Do you have a view on what characteristics make up the facilities with the most negative condition, and what is it that make them the best?

Mr. **Busey**. Yes, sir; we are very aware and very tuned into the best and the worst that the GAO indicated in their recent report. Some of the characteristics in what I would classify as the worst facilities are the high density of operations, the cost of living in the nearby areas, the increased workload that is imposed on the work force there because of the traffic in those high-density areas, and those are the areas that we are trying to address through the pay demonstration project.

Personnel management and sensitivity to the work force are also some of the factors involved in there, and Bill, you might take off on what we are doing about that.

Mr. **Pollard**. Sir, I would just like to say after the GAO report and after the hearing that the House had on this issue last year, I think we have had more cooperation with GAO than in past history, particularly as it relates to the air traffic program. We had those people come out to a managers meeting of our en route facility managers and our level 5, the larger terminal managers, and spent 2 days with them discussing the report.

We jointly sent that report to the 84 facilities they listed with a letter requiring that they develop action plans to address their local issues. There is not a common thread from a national standpoint, but, as the Administrator said, a lot of it has to do with living conditions, the amount of traffic, the types of traffic, and in some cases not only just the employees but with a manager involved.

So we have had quite a bit of activity in that area.

Mr. **Busey**. We are continuing to work the issue. I am interested, Senator, in having tools provided to our first line supervisors and senior managers to facilitate their ability to communicate and to be sensitive to the concerns of the work force. We are trying to get the work force more involved in problem solving and addressing working conditions, making those kind of suggestions. We have a lot of work to do at some of the so-called worst facilities, but I think we are tuned into that and we are going to be applying a lot of attention there.

Senator **Lautenberg**. Physical space is a problem in some of these. I mean, you cannot do an awful lot about the living conditions other than to appeal for the pay demonstration programs. But beyond that, you have to provide a workplace that has the best facility for the stressful work being done.

Mr. **Busey**. Yes, sir; and, of course, some of those types of projects in which we are involved include child care centers, rehabilitation of en route facilities and terminal facilities, constructing new TRACON buildings, all of which are part of the backlog, the so-called bow wave in F&E account that I am trying to get to.

Mr. **Pollard**. Sir?

FULL PERFORMANCE LEVEL CONTROLLER STAFFING

Senator **Lautenberg**. Yes.

Mr. **Pollard**. Could I go back just for a second to the question that you asked about FPL's? I think there is a story, one that we are not totally comfortable with but one that I would like to at least inform you of.

You know, on the full performance level controller measurement, our goal for this year was 12,725. That was an impossible goal, and I think that was developed somewhere within FAA jointly, and it is a number probably that should have never been transmitted to the committee. That would have been a 2,000-plus increase in 1 year, and it is virtually impossible.

What is, I think, a very positive story is that since 1982 we have generated almost 7,600 full performance level controllers, and out of the 17,209-controller work force that the administrator mentioned earlier, over 15,000 of those are operational controllers, 89 percent. That means that they can work at least two positions in their area of specialization.

So those that are not FPL's are still very productive controllers. FPL is the ultimate from the standpoint of convenience in scheduling, something that we certainly monitor, and is a milestone in a controller's career; but if I am an FPL in a midlevel facility and I go to a New York TRACON or to Chicago or to Los Angeles I lose that classification. So to shoot for an artificial total FPL number sometimes is not in the best management interests of the system. In fact, it is sometimes to our advantage to have the FPL numbers decline if it is more to our advantage to actually be putting those people in facilities where we need them.

Senator **Lautenberg**. I am not sure I understand that.

If you want the numbers to decline, ideally, if you could have full performance level people throughout the system, they might get bored but manning every position that you had, but that would be some kind of an ideal, maybe not even worth achieving but it sure raises the comfort level.

Mr. **Pollard**. Right.

FORECASTING FPL NEEDS

Senator **Lautenberg**. At this juncture, why can you not forecast what your FPL need is with a degree of reliability and also, therefore, estimate what your shortage is?

Mr. **Pollard**. We can, but we cannot just generate the FPL's. It is quite a long process, depending on where they go.

An example I was trying to give, for instance, if we wanted only to chase the FPL number and not be concerned with the same concerns that you have about the overall management of the system, we could assign our people to the VFR towers, levels 1 and 2, keep them there, and they would become FPL's, and the number would look good.

Senator **Lautenberg**. Sure; and they would close down at 7 or 8 p.m., depending.

Mr. **Pollard**. That is correct.

Senator **Lautenberg**. Getting back to the full staffing level, is there a certain number of controllers and trainees we need to have in the system to be able to pull out those who have the temperament, the learning capacity, et cetera, to become the FPL's that you need? Believe me, if you can do it with less, my hat is off to you because we do not have the spare dollars to deal out here.

But if you bring that level down, you also bring the opportunity for developing FPL's down somewhat. When you have the larger pool, obviously you have a better resource from which to draw.

Mr. POLLARD. I would respond this way, sir. Obviously, mathematically that is exactly correct. From a pragmatic standpoint in the facility, I am not saying it is this way but it could be that if one had fewer trainees in a facility, a trainee, or a developmental controller would have more opportunity for training and consequently could reach the full performance level status earlier.

If we have a large number of people training, sometimes that impacts the speed at which the people would attain that FPL level.

Mr. BUSEY. Then another thing we have to consider, Mr. Chairman, the controller work force is a volatile and a changing work force. That is why our target for this year, for example, was 17,000, but as we speak we are at 17,209. So we have not seen the attrition that we forecast for this year.

Senator LAUTENBERG. Right. Now is it 17,209 down from 17,495 or is it up from 17,000?

Mr. BUSEY. It is up from 17,000, which was our target.

Senator LAUTENBERG. That was, however, a change initiated under the previous, lower, FPL target?

Mr. BUSEY. As Bill tells me, it is up from 16,800, which was our target previously.

Another point that I wanted to make, we take a new young man or woman who comes through the system, we send them to New York TRACON, for example. It may take 2 to 2½ or even 3 years to bring them to full performance level. It is a very busy environment that they are working in. We cannot expect that person to want to stay there at that facility for the rest of their career. They may like to transfer to another facility, and we have to provide this opportunity for career progression and to avoid burnout. We have to move the people around.

SMOKING IN AIR TRAFFIC CONTROL FACILITIES

Senator LAUTENBERG. I want to ask you a question. Is there any control facility, any tower, in-flight service, et cetera, that has more than three people where there are no smokers?

Mr. POLLARD. Where there are no smokers?

Senator LAUTENBERG. Yes.

Mr. POLLARD. We have a lot of facilities, in fact most of the facilities, where you cannot smoke in a general area, an operational area.

Senator LAUTENBERG. Who makes that decision? I am just curious. You know I am a bear on smoking. I am the one responsible for the elimination of smoking in airplanes, and the tower is a little different.

Mr. POLLARD. We actually have a smoking policy as it relates to Federal buildings, but most of the time in the air traffic facilities you specifically ask about it from a committee of the employees working with management and they decide in what areas smoking will be permitted. It is a joint effort, but it is very restricted, certainly compared to several years ago.

Mr. BUSEY. I visited a lot of our facilities in the last month, Mr. Chairman, and I was trying to run through my mind. Of the more than 200 facilities I have been in, I can only recall two or three where smoking was permitted in a tower cab where there was not a special smoking section set aside for the smokers, and in none of our en route centers do I recall where smoking was permitted on the center floor.

Senator LAUTENBERG. It is funny, because I visit a lot of the towers, too. I fly into small airports and get out and complain that there was not enough space between me and the guy ahead of me, et cetera. I go up and visit. Boy, the smoke in those. I can understand it because the stress is at such a high level, and people work very hard in these places. It is easy to understand why they would turn to something like that. Better smoke than liquor, and better no smoke if we can avoid it altogether.

I wanted to welcome my colleague from Iowa, Senator Grassley, who is very diligent in his interest in transportation.

Did you have a statement you wanted to make?

PREPARED STATEMENT

Senator GRASSLEY. I am going to put it in the record, but I will have some questions.

Senator LAUTENBERG. Just 1 minute, if you will.

Senator GRASSLEY. May I put my statement in the record?

Senator LAUTENBERG. Without objection, absolutely.

[The statement follows:]

STATEMENT OF SENATOR GRASSLEY

Thank you, Mr. Chairman. And thank you, Admiral Busey for attending this morning's hearing.

As a native of the Midwest, Admiral Busey is sensitive to the transportation concerns of this part of the United States. Improved access to the United States' air transportation system is essential for the future of rural development. Whereas the urban areas of our country have ready access to numerous types of transportation systems, the rural areas of the United States do not have a metro system . . . or an expansive rail system . . . as do the urban areas. In many ways, rural America depends on the air transportation system *more* than the urban areas of the United States.

There is no area of this country that has suffered more economically over the last decade than rural America. In order for us to survive, the *must* have access to the air transportation system.

In recent years, this dependence has grown. With deregulation . . . and all of the benefits that it brings . . . air transportation has become more readily available and cheaper for everyone across the United States. There are people in the State of Iowa who never dreamed of being able to fly to distant points. But because of deregulation, now they can.

But even with deregulation, there are problems. There are pockets in this country that do not have good access to our air transportation system. And these pockets are almost exclusively in rural America. We must come up with innovative solutions to this problem.

I am confident that under the leadership of Admiral Busey these concerns will be addressed . . . and addressed in a positive and imaginative way.

Again, thank you to Admiral Busey and the other representatives from the Federal Aviation Administration for attending today's hearings.

PAY DEMONSTRATION PROGRAM

Senator **Lautenberg**. I wanted to talk about the pay demonstration project. We have discussed it at length, and I am a strong, strong supporter of recognizing the fact that there are high cost areas in this country where we need the skills and the commitment of Federal employees, whether it is the Department of Justice or air traffic controllers or any of the others; EPA, you name it. It is very tough, very hard to ask an employee to effectively make a contribution to the Government, so that they can do a more effective job, because when you move someone from a lower cost area to a higher cost area they pay for that themselves. So it is effectively asking them to make a contribution.

You cannot do that in business anymore. I used to run a big corporation, as you know. When you move someone, you have to consider the factors, moving costs, et cetera, and then living adjustments. It is very tough.

So the pay demo program was to enhance the ability of FAA to recruit and retain experienced and qualified employees in a designated occupation at certain hard-to-staff facilities.

What is your assessment in short form of the project's success so far in getting the kinds of people we want in the kinds of places that we need them?

Mr. **Busey**. Our look thus far, Mr. Chairman, tells us that the pay demonstration project is tending to do what we hoped it would do, attract qualified and new controllers into previously very difficult to staff areas. You are familiar with the 11 areas primarily in the concentrated metropolitan areas of New York, Chicago, San Francisco, and Los Angeles.

There is a down side to it, also, because we have a lot of other employees in those highly concentrated areas that are not being paid any cost-of-living bonus, and they are not participating in that pay demonstration project. So there is a down side on morale that we are beginning to experience.

I am very anxious to see the results of the contents of the latest Office of Personnel Management pay project that will address all Federal employees, because I am looking for more flexibilities to be able to pay recruitment bonuses and retention bonuses to my work force throughout the country and to begin to address cost of living in other areas that are not in the pay demonstration project.

We simply need to pay more attention. I am suffering from problems in our civil service structure in the air traffic control work force, for example, where several levels of the senior air traffic managers at the GS–15 level are only separated from controllers and each other by one grade step level. The pay difference is not that much, and there is a disincentive for controllers and managers to want to move on into senior executive management. If they so move they sacrifice because they give up their early retirement options, and they give up night differentials and overtime opportunities also. We somehow need to pull that back into balance as well.

Senator **Lautenberg**. I would like to hear your plans for that when you get them more developed.

What has been the impact on staffing of nearby facilities that are not included in the pay demo projects like Kennedy or La Guardia?

Mr. **Busey**. What we have experienced is a migration of qualified air traffic controllers from noncovered facilities in the New York metropolitan area, for example, into the covered facilities, which then requires us to have to backfill, and that is part of the down side because we cannot include all of the activities——

Senator **Lautenberg**. I will tell you what is happening with the FBI. The FBI in New York City has a higher pay level for this demo project, and people living in New Jersey who can just as easily commute to New York do not get it, and they want to transfer.

Mr. **Busey**. We are seeing the same thing, and that is part of the down side.

Senator **Lautenberg**. Senator Grassley has a few questions, and then we will get back. Thank you.

RESEARCH EFFORTS ON AGING AIRCRAFT

Senator **Grassley**. Thank you very much, Mr. Chairman.

The Aviation Safety Research Act of 1988 directed the FAA to expand its research efforts in the area of aging aircraft and particularly in the defects and metal corrosion.

What are the FAA's plans to expand research efforts on aging aircraft?

Mr. **Busey**. Senator Grassley, I would like to call on my expert, Mr. Pozesky, to deal with that, if I may.

Mr. **Pozesky**. Senator, we have initiated a variety of activities in response to the act and efforts we had started earlier. We have a national aging aircraft research program which resulted in an international conference in the summer of 1988. We are looking at airframe engine fatigue. We are putting a lot of effort into nondestructive testing and corrosion detection to try to get a better sense of the detection and inspection techniques for that.

There has been a technical oversight group made up of industry experts who are familiar and work on a day-to-day basis in this kind of technology that are reviewing both our regulatory and our research action.

We recently sponsored in Baltimore an international conference on aviation safety and aging aircraft in October, and we are establishing under our R&D advisory group a group focused on this.

We are also beginning to work with several universities to try to build a capability in research in that area.

Mr. **Busey**. I might add, Senator, if I may, that this last point, our ability to interface with academia, was one of the issues about which I was surprised when I came to the FAA and I learned that we did not have grant authority to be able to interface directly with academia. Only by the specific direction of the Congress were we able to interface, sometimes with some difficulty, with academia because of legal contractual situations.

I understand that there is a House-proposed bill that is now before Chairman Ford's subcommittee to address this issue of the possible statute which will give us the authority to have better access to academia.

EXPANDING RESEARCH EFFORTS TO UNIVERSITIES

Senator GRASSLEY. So then you cannot without that statute take any initiatives to expand your research efforts to universities without that legislation, or can you do that somewhat on your own now and you are telling me that you are trying to do it?

Mr. BUSEY. We are trying to do that. We can do it on our own, but we must work through other Federal organizations that have the ability to directly access academia, such as NASA. So this additional flexibility would be very helpful to us.

Senator GRASSLEY. You mentioned emphasis upon research as well as regulatory. Would you say that there is as much emphasis upon research as regulatory, or that research is a very minor effort in the initiatives that you just described?

Mr. POZESKY. In the initiatives it is getting a lot of emphasis. We recognize that we are not doing as much as we believe the technology would allow, and we are emphasizing a great deal more in that area. So in the notion of emphasis, clearly building our research area is an important emphasis for us.

RESEARCH JOINT VENTURES

Senator GRASSLEY. If you can take some initiatives, what types of joint ventures in research does your agency have with industry and with universities?

Mr. BUSEY. We have ongoing effects or attempts with industry in nondestructive testing, corrosion control. We have been very careful, Senator, as we go along to make sure that we are not duplicating other agencies' work. I have been very concerned that the Department of Defense, to my knowledge, has been working in this area for a number of years, so I have wanted to make sure that we were working in concert with them, identifying areas that they were not covering, and then attempting to cover that ourselves.

Marty, are there other areas?

Mr. POZESKY. I would agree, and I would just add to that that there are formal programs. We have a joint university program which we have contracted for on a competitive basis, and we needed to go through the competitive process to do that. I think the legislation that the Administrator talked about would let us do more on a grant basis. Right now we are constrained to go through the Government's competitive rules to do that.

We have small business initiatives in this kind of technology. We are working with the Transportation Research Board on this kind of technology, and we are working with the manufacturers in the airframes to get a better understanding.

Senator GRASSLEY. In your response to my question using the phraseology "joint ventures", what you described to me you call a joint venture?

Mr. BUSEY. Yes, sir; because we have had to do them competitively. I would like to have the opportunity to go to academia from a grant standpoint to encourage them to do work in fracture mechanics and corrosion control, in nondestructive testing, in automated testing devices, things of that nature.

Senator **Grassley**. What you just described, then, all deal with the general category of metal fatigue?

Mr. **Busey**. Yes.

AVIATION SAFETY AND RELIABILITY INITIATIVES

Senator **Grassley**. What initiatives does the FAA have in place to ensure the public safety and aviation safety reliability during flight?

Mr. **Busey**. There are countless initiatives there. Let me ask Mr. Broderick to deal with that.

I will pass you the microphone.

Mr. **Broderick**. Senator, we have a number of initiatives. Aging aircraft is the subject of directives which we require replacement of parts before they crack now rather than the inspection to detect cracks. We have issued directives or are in the process of issuing directives for the entire fleet for that and for corrosion. The Administrator formed a systems task force following the Sioux City accident to develop novel ways of protecting vital aircraft systems after catastrophic events like engine failures—which was the cause of that tragic accident.

We also have learned from that experience and have formed a task force, another advisory committee dealing with better ways to contain fragments from explosive engine disintegration so that those fragments would not cause the kind of difficulties that led to that accident.

We have a number of initiatives underway in improved pilot training regulations, both to simplify the regulations and take advantage of new simulation technology to providing better training, higher quality training for pilots in a shorter period of time.

Senator **Grassley**. Could I ask you to submit additional examples in writing?

Mr. **Broderick**. We would be happy to do that.

[The information follows:]

The FAA has a comprehensive safety program to ensure safety during flight. Examples of recent initiatives and initiatives currently underway follow:

Traffic Alert and Collision Avoidance Systems—This rulemaking action requires the installation of TCAS on commercial aircraft operating in U.S. airspace. TCAS alerts the pilot of intruder aircraft and provides the pilot with collision avoidance guidance.

Status: The FAA amended the TCAS rule, effective May 9, 1990, to revise the schedule for installing TCAS-II on airplanes with more than 30 passenger seats. The amended rule requires 20 percent of the U.S. fleet to install TCAS-II by December 30, 1990, 50 percent by December 30, 1991, and 100 percent of the civil fleet by December 30, 1993.

Ground Proximity Warning Systems (GPWS)—This rulemaking action would require the installation of GPWS on commuter category aircraft. GPWS commands the pilot to conduct escape maneuvers when the aircraft is approaching rising terrain or the aircraft has an excessive rate of descent.

Status: The FAA published a notice of proposed rulemaking in the Federal Register on April 24, 1990 (79 FR 17358). The comment period closes on July 23, 1990.

Seat Retrofit—This rulemaking action would require all seats in air carrier aircraft to meet improved crashworthiness standards.

Status: The FAA expects to publish the final rule in the Federal Register in the summer of 1990.

Overwater Survival—This rulemaking action would require adequate, uniform life preservers, life rafts, and flotation devices for passengers, including infants and small children, on air carrier airplanes and rotorcraft.

Status: The FAA expects to publish the final rule in the Federal Register in the summer of 1990.

High Energy Radiated Electromagnetic Fields (HERF)—The increased use of electronic systems for avionics and control of aircraft has rendered the aircraft systems potentially vulnerable to radiated electromagnetic energy. The purpose of this program is to establish standards for the protection of electrical and electronic systems on aircraft from the effects of HERF.

Status: As a result of the efforts of the FAA and the Joint Airworthiness Authorities, a multinational HERF envelope, common requirements, and associated compliance criteria have been developed. The FAA plans to publish a notice of proposed rulemaking in the Federal Register in early FY 91.

Emergency Electronic Locators (ELT)—This rulemaking action would require the installation of an improved ELT on new airplanes. In case of an accident, ELT's transmit a signal that alerts search and rescue centers and provides search teams with information to home in on the aircraft's location.

Status: The FAA issued a notice of proposed rulemaking in the Federal Register on April 2, 1990 (63 FR 12316). The comment period closes on July 31, 1990.

BLOCK GRANT DEMONSTRATION

Senator GRASSLEY. So I could hasten to a last question that I want to ask Admiral Busey, and I thank you very much. It was a very thorough answer, but the more examples we get, I would appreciate it.

Mr. BRODERICK. Yes, sir.

Senator GRASSLEY. In regard to the administration's proposal to increase the number of States that can be in a block grant demonstration to 7 States I believe it is, is the fact that the FAA proposed to increase the demonstration probe to 10 States—I hope I have got those numbers right—but anyway whether it is 7 or 10, is that an indication that you believe the initial demonstration program of 3 States was a success?

Mr. BUSEY. Yes, sir; the short answer is yes, and you do have the numbers correct because what we have asked for is an additional seven States. We have Missouri, Illinois, and North Carolina participating now. I have seen enough now to be encouraged by State participation. I want to encourage more States participation in working with us to helping set priorities particularly for general aviation airports. We have got strong State aviation organizations in many of our States across the country. I want to encourage strengthening of those processes in the States where they perhaps are not so strong. So, I think you should read into what we have requested is an indication that we are more willing and ready to work with the States and encourage them to strengthen their participation with us.

Senator GRASSLEY. OK. Then does that mean that you have a position of more State involvement in the selection of airport funding priorities?

Mr. BUSEY. Yes, sir.

Senator GRASSLEY. And do you see this as a trend toward greater State involvement nationwide beyond the demonstration projects?

Mr. BUSEY. Yes, sir.

Senator GRASSLEY. Thank you, Mr. Chairman.

Senator LAUTENBERG. Thank you very much, Senator Grassley.

Admiral Busey, unfortunately our time has some competition with the arrival of the Lithuanian Prime Minister, and you know that that is a subject of great interest to many of us. And I wanted to say at the outset that I appreciated your willingness to shift your schedule with such short notice, and I thank you and your colleagues for doing that. We will try to wrap up with a couple of questions I would like specifically for the record publicly and then submit quite a few questions that still remain that I would like answered in writing.

STATUS OF NAS PLAN PROCUREMENTS

In your statement you make the point that appropriation of the full F&E amount is particularly vital in 1991 since you are entering—and I use your expression, I think—the homestretch of implementation of the major NAS plan projects. Homestretch produces more smiles than nods, I think, given the delays associated with the NAS plan and the implementation problems. What does home stretch mean here?

Mr. BUSEY. Yes, sir; when I refer to homestretch in the original NAS plan projects, I am talking about the original 90 programs, the 89 plus 1 that were generated when the NAS plan modernization program was initially developed back in the 1981-82 timeframe. We are to the point now in my judgment where we have bow waved our requirements out to the point where I find myself with the situation where equipment is coming, options are ready to be exercised, hardware is ready to be built. We are stepping up our procurement of ASR-9 radars, for example. We have coming the next generation weather radar, the NEXRAD capability, and the terminal Doppler wind-shear radar equipment, to mention just a few. We are to the point next fiscal year where the peak expenditures of development of the AAS system are staring us in the face. AAS, VSCS, some of those larger programs are not fully funded, as you know, sir.

So I find myself faced with the situation where I need these dollars to begin to exercise the procurement options that will lead to the delivery of these equipments into our facilities in the next 3 to 5 years. I am very optimistic. You are paying me to be optimistic.

IMPACT OF REDUCED NAS PLAN FUNDING

Senator LAUTENBERG. No; we are being paid by the same employer, and we work hard at it, nose to the grindstone kind of thing, and never permit optimism to guide our budgetary decisions. What happens if you do not receive the full amount requested?

Mr. BUSEY. If I do not get the requested amounts I am going to have to continue bow wave, to put off and——

Senator LAUTENBERG. You have got to change your terminology. We are talking aviation and not seafaring.

Mr. BUSEY. I am going to have to continue to put off exercising procurement options that are built into the contracts that we have. I am going to have to continue to delay the modernization of air traffic control towers that will improve working conditions for my people and for modernizing centers. I am going to have to make priority judgments as to which systems can I delay and which systems can I not delay. To a great degree, I am bound by contractual requirements that have been negotiated in past years.

SPECIFIC NAS PLAN PROJECT DELAYS

Senator **Lautenberg**. There are many of us, Admiral, and it comes as no surprise to you, who would rather kind of step back, take a breath and say, "All right, listen, work on that credibility gap a little bit. Show us that these decisions are going to be made not ponderously but thoughtfully." We heard from GAO about the likelihood of having to order 1960's-era equipment, Univac equipment where they have specifically opened a production line to accommodate you. That does not sound like it is a very wise expenditure.

Now, if you do not have facilities in an operating room and you have a disaster, you go out and you buy what you can whenever you can, wherever you can, and you do it. But based on the experience that we have had and these incredible delays and this constant moving of the target, I for one think it is probably the right time in view of the other needs to step back a little bit and take a really close look at every one of these things. We are talking about a lot of money here, over $2 billion, and we want to give you a chance to get all of the things in order. Because the decisions we make today are really very long term decisions, and we are talking into the next century.

So we would ask you to exercise those judgments and make the priority decisions and say this can wait and this cannot wait. And I for one, coming out of the industry that I do, the computer industry, the prospect of ordering equipment that was in vogue in the sixties is almost embarrassing in terms of the technological leapfrogging that has taken place since then.

Can you tell me what specific programs might be delayed if we were cut back to a 17-percent increase over the 1990 level, $2 billion, instead of the full sum requested?

Mr. **Busey**. I would, as I mentioned, would have to delay air traffic control tower modifications. Another issue that I am concerned about that I find——

AIR TRAFFIC CONTROL TOWER MODIFICATIONS

Senator **Lautenberg**. What modifications? Are you talking about the enlargement of facility?

Mr. **Busey**. Replacing facilities, sir. We have got some 30-year-old air traffic control towers throughout the system, more than 200 that need modernization.

Senator **Lautenberg**. 200 towers in the system?

Mr. **Busey**. We have 400 air traffic control towers in the system, but we have many of them that are more than 30 years old. They need modernization. They have got asbestos problems in them. We have got air circulation problems. They are too small. We have had the traffic growth. We have got more controllers crowded into——

Senator **Lautenberg**. There is certainly a priority list for those things, sir.

Mr. **Busey**. Yes, sir; there is, but I would have to give those up because I am dealing with competitively negotiated contracts from several years ago on major systems that I am very reluctant to break because they would have to be renegotiated. We all know what would happen if I have to do that. The prices are going to go up. I am trying to get a hold on definitizing the baseline on the programs that we have so that there is no more opportunity for cost growth. I think we have done that. I have also——

Senator **LAUTENBERG**. What portion of the expenditure would be attributed to the delay in the expansion of the physical tower system which you are talking about?

Mr. **POZESKY**. No; there is about $70 million in the fiscal year 1991 appropriation request that deals with the modernization of the towers, but that is only a portion of the backlog, and we have made those priority decisions. But I think that is fairly close to the accurate number.

Mr. **BUSEY**. Another thing, Mr. Chairman, that I am concerned about, the NAS plan was based on the consolidation of all FAA facilities into 23 so-called area control facilities, ACF's. In my review of that I am concerned that that would make us far more vulnerable than I am willing to accept; the risk to consolidate radar approach control facilities into 23 is far too risky.

INTERMODAL TRANSPORTATION OPPORTUNITIES

Senator **LAUTENBERG**. Admiral, I am going to ask you to do this for me, please. Present for the committee a list of those things in the priority order that you consider the most vital. I mean, when we talk about $47 or $70 million in tower improvements that are necessary to meet the enlarged system out of $2.5 billion we have a long way to go, and we are up against the wall.

[The information follows:]

The FAA's FY 1991 F&E budget request is the product of a series of rigorous and exhaustive reviews in which many programs competed within the agency for limited resources, and against other programs at the DOT and OMB levels of review. The result is a well-balanced combination of requirements designed to achieve the Administration's goals of modernization of the airspace system, as well as the maintenance of the current infrastructure.

There are four categories by which the agency's request could be described. The first of those, as mentioned in earlier testimony, is "ongoing contracts;" the others are "infrastructure," "airport capacity enhancement," and "new starts."

Included in the category of ongoing contracts would be virtually all of the agency's modernization projects, such as the advanced automation system, the voice switching and control system, terminal Doppler weather radar, long range radar, next generation weather radar, Mode S, airport surveillance radar, radio control equipment, flight service automation system, automated surface observing system, and the systems engineering and integration program. Ongoing contracts also include those which support maintenance of the current infrastructure, such as the interim support plan and the replacement of AN/GRN-27 type instrument landing systems. Disruption of these contract schedules could cause the government to lose cost savings achieved through competitive bidding.

Programs sustaining the current infrastructure include center modernization, tower replacement/modernization, upgrade of the traffic management system, high capacity voice recorders, radio frequency interference elimination, various navigational aids replacement programs, as well as numerous other programs.

The airport capacity enhancement category includes such programs as the Los Angeles basin facilities consolidation and expansion, the Mode C Intruder program, the Dallas/Ft. Worth metroplex expansion, the FAA support of the new Denver airport, and the relocation of the Chicago Tracon facility, among others.

In addition to the ongoing contracts and programs of the categories and types listed above, the agency has included in its request only three high-priority new starts, the Alaskan NAS interfacility communications systems, the new Austin airport project, and replacement work stations so that inspectors can access the aviation safety analysis system. While these programs, as new starts, may appear to be the most vulnerable to reductions, each has a unique, time-sensitive timetable which causes it to be an important part of the agency's request.

We are prepared to work with committee staff regarding specific program schedules.

Senator LAUTENBERG. I want to ask you a question. You are a specialist in aviation, but you understand the national needs in transportation totally. Can you see any advantage on short hauls like Washington-New York, New York-Boston, Dallas-Houston, Detroit-Chicago, 200- to 300-mile trips that could be better served if we had high-speed rail than to continue to use this shrinking resource of ours, the airways or the airlanes?

Mr. BUSEY. I definitely think that there are other multimodal or intermodal type of transportation opportunities that we should be looking at: high-speed rail, maglev certainly has a role to play in the short haul, and that could potentially free up runway utilization by commuter and short haul air taxi operations.

Another way we can approach this is through tilt rotor technology that I am very high on that would provide us air transportation for these same types of short haul roads or routes and also contribute toward a reduction of utilization by aircraft that now require runways to carry people this way. So I think there is that kind of an opportunity, sir.

And if I could make one more point on the money issue, Mr. Chairman. Please do not ignore that what we think we have submitted this year is a fully supported administration package where our budget request for fiscal year 1991 is totally in sync with the 5-year reauthorization program that we have asked for. We have full administration support to spending down the trust fund—using dollars that have accumulated in the trust fund to help us pay our operations accounts. I can also assure you that our expenditure and our obligation performance in facilities and equipment is improving. Because the large programs like AAS and VSCS are off the full funding concept, I can assure you that we intend to fully obligate in the next fiscal year the dollars that we have intended to go toward those not fully funded programs.

MATCHING NAS PLAN REQUIREMENTS TO FUNDING AVAILABILITY

Senator LAUTENBERG. We take all of your requests serious, and we respect the FAA's functioning and do not in any way denigrate the serious commitment or effort by the management and staff at FAA.

The problem that we have is that when we look at where we stand compared to where we thought we would be, again, skepticism is a prevailing mood. And you have got to kind of show us your ability to accomplish goals on schedule, when you put that in context with the funds available. So, I would ask your continued cooperation to see what kind of a priority system we can establish, recognizing that we are just not going to have the funds available.

There is going to be funding for a substantial increase, but I do not see how we can get the full funding level there that you would like to see. And we do not have any assurance that the PFC's are going to be turned into law. That is not in my jurisdiction. And failing that, it changes the equation a little bit there as well.

SUBMITTED QUESTIONS

Now, again, I would like to see it, and I do not know whether you have any information indicating that this is going to move forward rapidly. I do not think that is possible. But I thank you very much, thank you and your colleagues again, Admiral, and would ask that you get back to us promptly on the written questions.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

ORGANIZATION

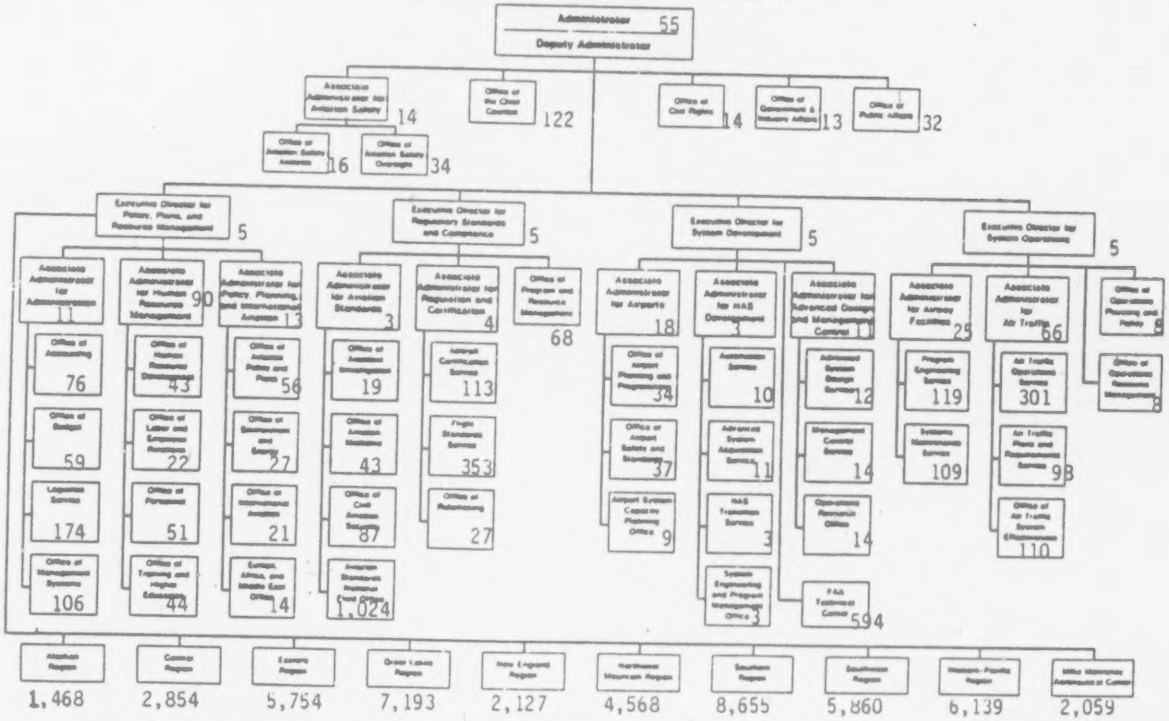
SENATOR LAUTENBERG: Provide your latest organization chart and show the number of personnel assigned to each of the offices and regions.

ANSWER: The organizational chart follows:

FY 1991 FULL TIME PERMANENT
OPERATIONS APPROPRIATION (DIRECT)

U.S. Department of Transportation

FEDERAL AVIATION ADMINISTRATION


Administrator 55
Deputy Administrator
Associate Administrator for Aviation Safety 14
Office of Aviation Safety Analysis 16
Office of Aviation Safety Oversight 34
Office of the Chief Counsel 122
Office of Civil Rights 14
Office of Government & Industry Affairs 13
Office of Public Affairs 32
Executive Director for Policy, Plans, and Resource Management 5
Associate Administrator for Administration 11
Office of Accounting 76
Office of Budget 59
Logistics Service 174
Office of Management Systems 106
Associate Administrator for Human Resource Management 90
Office of Human Resource Development 43
Office of Labor and Employee Relations 22
Office of Personnel 51
Office of Training and Higher Education 44
Associate Administrator for Policy, Planning, and International Aviation 13
Office of Aviation Policy and Plans 56
Office of Environment and Energy 27
Office of International Aviation 21
Europe, Africa, and Middle East Office 14
Executive Director for Regulatory Standards and Compliance 5
Associate Administrator for Aviation Standards 3
Office of Accident Investigation 19
Office of Aviation Medicine 43
Office of Civil Aviation Security 87
Aviation Standards National Field Office 1,024
Associate Administrator for Regulation and Certification 4
Aircraft Certification Service 113
Flight Standards Service 353
Office of Rulemaking 27
Office of Program and Resource Management 68
Executive Director for System Development 5
Associate Administrator for Airports 18
Office of Airport Planning and Programming 34
Office of Airport Safety and Standards 37
Airport System Capacity Planning Office 9
Associate Administrator for NAS Development 3
Automation Service 10
Advanced System Acquisition Service 11
NAS Transition Service 3
System Engineering and Program Management Office 3
Associate Administrator for Advanced Design and Management Control 11
Advanced System Design Service 12
Management Control Service 14
Operations Research Office 14
FAA Technical Center 594
Executive Director for System Operations 5
Associate Administrator for Airway Facilities 25
Program Engineering Service 119
Systems Maintenance Service 109
Associate Administrator for Air Traffic 66
Air Traffic Operations Service 301
Air Traffic Plans and Requirements Service 98
Office of Air Traffic System Effectiveness 110
Office of Operations Planning and Policy 8
Office of Operations Resource Management 8
Alaskan Region 1,468
Central Region 2,854
Eastern Region 5,754
Great Lakes Region 7,193
New England Region 2,127
Northwest Mountain Region 4,568
Southern Region 8,655
Southwest Region 5,860
Western-Pacific Region 6,139
Mike Monroney Aeronautical Center 2,059

NOTE: The distribution by office is in a state of flux as organizational adjustments are being fully implemented.

MANAGEMENT OVERSIGHT

SENATOR LAUTENBERG: The recent use of a "contractor monitoring other contractors" appears to be an innovative way to expand the contracting officer's presence at facilities throughout the country. What method is being used to assess the effectiveness of the concept, that is, has contractor performance improved since CEXEC has initiated its surveillance? How are CEXEC's concerns provided to responsible program managers?

ANSWER: An internal evaluation is underway to assess the effectiveness of various facets of the concept and identify areas where improvements may be made and how these resources are used in contract management. Preliminary indications are that the CEXEC presence has identified potential problem areas much sooner than previous experience, allowing both FAA and the NAS contractor to take remedial action before these issues become unwieldy. In addition, an in-plant presence has given the FAA a greater ability to respond with greater speed to contractor reports, correspondence, and other documents, thus further aiding NAS contractor performance.

CEXEC's concerns are provided to the contracting officer through daily interaction, as well as their submission of formal monthly reports on each individual contract they monitor. As part of the program manager's team, which is managed under a matrix-management concept, it is the responsibility of the contracting officer to identify these concerns to the program manager.

SENATOR LAUTENBERG: The Subcommittee understands that FAA has recently awarded a systems engineering contract to TRW to assist in resolving problems in automation programs such as AAS and VSCS. In light of FAA's further intentions on acquiring additional support contractors, it appears that FAA is altering its initial systems integrator concept.

What specific plans does FAA have to acquire additional systems engineering support, that is, how many contracts are envisioned, when will this happen and how much will this cost?

ANSWER: The current system engineering support contract will be phasing down beginning in FY 1992. The current contract contains several tasks, including both system engineering and specific program support. FAA envisions replacing the current contract with a smaller system engineering effort and several "functional" support contractors (similar to AAS and VSCS). The follow-on SEI contract will cost approximately $70 million per year. Estimates for the costs of the "functional" support contractors to support the specific project efforts will vary depending on the scope of work yet to be determined.

SENATOR LAUTENBERG: The Subcommittee understands that a "cap" on total SEIC funding was established a few years ago and that this has affected FAA's ability to have the SEIC perform additional systems engineering and integration duties. Does such a "cap" exist and who mandated its application?

ANSWER: There is no "cap" on the FAA's Systems Engineering and Integration (SEI) Contract. The SEI contractor's performance of systems engineering and integration duties is only contractually constrained by the technical scope of the contract and the contract's limitation of liabilities clause that details the amount of funding available.

SENATOR LAUTENBERG: On the basis of award fees received by Martin Marietta in conjunction with the SEI contract, it appears that the SEI concept is working to FAA's satisfaction. Will the follow-on SEI contract be competitively procured? When will the request for proposals be issued to industry? Will the functions remain similar to those performed today or will there be a marked change in scope?

ANSWER: The SEI follow-on contract, now called the Systems Engineering/Technical Assistance (SETA) contract, will be competitively procured. Our present plan indicates requests for proposals will be released to industry and contract award will occur during FY 1991. The scope of the future SETA contract is under study and remains, at present, undetermined.

SENATOR LAUTENBERG: In line item 5c(17), $3 million is requested for regional transition planning and regional integration and implementation. Isn't this a function already performed by the SEIC?

ANSWER: The SEIC presently performs similar functions. However, the current SEI effort will not satisfy both the continuing regional support levels required as the NAS implementation continues beyond FY 1991 as well as the system engineering and management support services included in item 5c(1). The $3.0 million under 5c(17) will ensure the continuity of regional implementation and transition efforts in the fourth quarter of FY 1991. This effort would proceed as a separate line item in the outyears as NAS implementation continues.

It is critical that adequate transition planning support continues for the regional integration of NAS systems.

DEFERRALS

SENATOR LAUTENBERG: Administrator Busey, there currently exists over $1 billion in funds that the FAA has asked be deferred. What that means, is that $1 billion of facilities and equipment money previously appropriated by this Committee will not be obligated during this fiscal year. Why have you found it necessary to defer such a large amount of available funds?

ANSWER: The current deferral amount for the FAA Facilities and Equipment appropriation is $1,175,425,048 which is the estimated amount of unobligated balances expected on September 30, 1990. This amount is proportionately consistent with amounts experienced in previous years. A relatively high level of unobligated balances are to be expected with acounts that fund sophisticated equipment items installed into facilities whose installation depends on the completion of other interrelated systems and must be budgeted based on the Full Funding concept. The Full Funding concept (required by the Office of Management and Budget, and encouraged by DOT, GAO and the Congressional Appropriation Committees) requires that all funds necessary for procurement, installation and commission of specific projects must be fully appropriated during the first year the project is funded.

While Full Funding (as opposed to Incremental Funding) generally facilitates better budget estimates, and avoids potential costly delays due to subsequent funding constraints, a certain amount of funds appropriated initially cannct and should not be obligated until needed. As a result, unobligated balances will continue to exist, but their existence should not be construed as funds not required or as funds frivolously solicited too far in advance of need.

Deferral, per se, is an administrative constraint requested by the FAA during the apportionment of funds by the Office of Management and Budget. Deferrals reflect the estimated amount of unobligated carryover at year-end, as do exhibits in the annual budget submission (although the amounts may differ due to timing). Actual unobligated amounts are shown in the prior year column of the budget submission and on accounting documents available to the Congressional Budget office and other interested organizations.

The FAA is reviewing the necessity to continue the formal deferral of carryover balances and we may choose to eliminate the practice in the absence of any further legal basis for such deferrals.

SENATOR LAUTENBERG: The previous administration took some delight in calling Congress to task for not appropriating all the funds requested in a given year, but never pointed out that they weren't spending the money provided. What are your plans to obligate these deferred funds?

ANSWER: The estimated unobligated carryover for September 30, 1990, of $1,175,425,048 which has been formally deferred is planned for obligation during the two fiscal years following fiscal year 1990.

During those years, FAA will be taking delivery of many items of NAS equpment and installing them in the field. Examples of systems to be fielded and commissioned during FY 1991 and FY 1992 are the Automated Flight Service Stations, Automated Weather Observing Systems and the Microwave Landing Systems.

Technically, some of those unobligated funds could be obligated as late as fiscal year 1994 since the Facilities and Equipment appropriation is legally allowed to incur obligations for a period of five years. Projects funded by this appropriation are long-term with respect to the time needed to procure, receive and install equipment or design, construct and occupy facilities. That fact, combined with the requirement to request Full Funding of a long-term project or discrete segments thereof, in the first year of appropriation, ensures that there will always exist a relatively large unobligated carryover at the end of each fiscal year. The existence of that unobligated balance does not mean that funds provided will not be spent; rather, it means that they will not be fully obligated or spent during the first year of availability, since that would be neither prudent nor possible.

SENATOR LAUTENBERG: Are these funds still scheduled to be obligated on the programs for which they were originally requested?

ANSWER: Generally speaking, the intent is always to obligate funds for the purposes for which funds were requested in budget submissions. In an ideal world where estimates would exactly equal actuals five or six years later and there were no cost overruns or underruns, bid protests, changing priorities, natural disasters or any other event that would alter cost, it would be safe to say that every cent would be spent where originally intended. Based on variances inherent in budget estimating, however, our primary intent must be to complete the scope of each budgeted task with the understanding that the final cost may be higher or lower than the original estimate.

SENATOR LAUTENBERG: For the record, please provide a detailed description of the amounts deferred, and the specific programs for which they were appropriated.

ANSWER: The estimated unobligated balance for September 30, 1990, which is reflected as a formal deferral of funds, is predicted to occur as follows:

FEDERAL AVIATION ADMINISTRATION
FACILITIES AND EQUIPMENT APPROPRIATION
Estimated Unobligated Balance as of September 30, 1990
($ in Thousands)

PROGRAM	AMOUNT
Air Route Traffic Control Facilities	
Long Range Radar	$ 98,689.5
Automation Equipment	118,580.6
Other Center Facilities	71,752.3
Airport Traffic Control Facilities	
Terminal Area Radar	141,402.6
Terminal Area Automation	93,167.7
Other Tower Facilities	201,698.3
Flight Service Facilities	48,437.6
Air Navigation Facilities	
VOR/VORTAC/DME	34,649.4
Low and Medium Frequency Facilities	4,253.6
Instrument and Visual Landing Aids	106,442.6
Housing, Utilities and Misc. Facilities	231,080.6
Aircraft and Related Equipment	14,879.6
Development, Test, and Eval. Facilities	10,390.6
Personnel Comp., Benefits and Travel	0.0
TOTAL	$ 1,175,425.0

JOINT USE AIRPORTS

SENATOR LAUTENBERG: The Airport and Airway Act of 1982 required the Departments of Transportation and Defense to submit to the Congress a plan for achieving greater joint civilian and military joint use of military facilities. Although all the departments provided the Congress a report in 1983, it had no goals, schedules, no projection of resource needs, and no statement of work or other means of holding the departments accountable for achieving joint use.

Is there a plan for achieving additional commercial use of military facilities?

ANSWER: There is no plan. The FAA identifies where joint use would be advantageous, solicits cooperation from the Department of Defense (DOD), and helps local authorities to pursue joint use on a case by case basis. However, the DOD policies, procedures, and criteria, as included in the 1984 report to Congress, are so restrictive that a plan is not warranted.

SENATOR LAUTENBERG: What are the principal obstacles to effective DOT-DOD negotiations in this area?

ANSWER: The DOD has complete control of the issue and has not had adequate incentive to permit greater joint use. Financial incentives might be helpful, and stronger and more favorable policy direction is also needed to further negotiations.

AGING AIRCRAFT

SENATOR LAUTENBERG: FAA is in the process of mandating through its airworthiness directive process millions of dollars of repairs to the oldest members of the United States' commercial airline fleet.

Please explain how FAA determines the economic impact on the airline industry of such categorical and broad requirements as mandatory corrosion control programs and replacing large sections of aircraft skin on hundreds of airliners.

ANSWER: The economic impact of any airworthiness directive action determined based on the estimated cost impact of that particular airworthiness directive. These costs are determined based upon the total number of aircraft of the particular model on the U.S. registry, the manufacturer's estimate of parts cost and employee hours required to accomplish the mandated action, an airline agreed upon cost per employee hour, and a specific time period for those particular airworthiness directives which require repeated inspections. For the two examples you cited these costs were estimated as follows:

Corrosion Programs (Cost for a 6 year inspection cycle)

	Cost per Airplane	
B-707/720	$80,460	$ 5,967,360
B-727	80,000	91,444,000
B-737	38,720	8,983,040
B-747	188,800	12,272,000
	TOTAL	$118,666,400

Structural Modifications (Cost for initial 4 year period)

B-727	$1,057,212	$70,833,204
B-737	898,070	25,145,960
B-747	2,300,000	46,000,000
	TOTAL	$141,979,164

SENATOR LAUTENBERG: Does FAA expect that our aircraft repair industry will be able to absorb this kind of added requirement without an expensive bottleneck occurring and only the airlines with either their own facilities or enough foresight to plan ahead will be able to have their aircraft repaired within the FAA-mandated timeframe?

ANSWER: The FAA looks upon these airworthiness directives as corrective actions for unsafe conditions in the U.S. transport fleet. We have allowed the maximum time for compliance consistent with the safety of the aircraft.

We understand that, without immediate scheduling of aircraft and contracting as necessary with outside repair facilities, some airlines will have difficulty meeting the compliance time requirement. We anticipate that these airlines will petition for exemption to continue operating their aircraft beyond the compliance date. At this time, we intend to deny all petitions and require that the airlines discontinue operating these airplanes.

In summary, the FAA does expect that only airlines which have the foresight to plan and schedule their airplanes for these inspections and modifications are going to be able to meet the requirements.

SENATOR LAUTENBERG: You are also requesting 35 additional aircraft certification positions to meet your aging aircraft workload requirements. Will your operation and maintenance safety inspectors also play a role in monitoring and enforcing the recently issued airworthiness directives related to aging aircraft? If so, what will they do?

ANSWER: Yes, our FAA maintenance inspectors will be primarily responsible for monitoring and enforcing the aging aircraft airworthiness directives. We are currently taxing the availability of these personnel as we carry out our aging fleet evaluation program. Our planners are currently developing schedules and personnel requirements as we institutionalize this program. You will see the results of their efforts in our next budget submission.

SENATOR LAUTENBERG: Some of your aging aircraft rulemakings address the issues of corrosion and metal fatigue. Do you have any new training programs to train inspectors in these areas?

ANSWER: Yes we do. Both Boeing and McDonnell have conducted courses for our maintenance inspectors in these areas. These courses addressed the manufacturer's structural repair manual requirements for corrosion treatment and control and the supplemental structural inspection documents (SSID's) which require specific inspections where the engineers have predicted that fatigue cracking is likely to occur. We are now following up on these initial courses by developing our own in-house corrosion course. We have asked the U.S. Navy to assist us in putting together a comprehensive course on corrosion. We are also presenting a fatigue course to our FAA engineers and to those Designated Engineering Representatives, (industry or private individuals), who have the authority to evaluate repairs and modifications to these airplanes for the Administrator.

FLIGHT PLAN FOR TRAINING

SENATOR LAUTENBERG: In January 1989, FAA launched its Flight Plan for Training program to upgrade and modernize the recruitment and training for its safety-related work forces. The program encompasses 47 individual projects within eight major areas. It is expected to cost $406 million and extend through 1994.

What is the current status of FAA's implementation of the Flight Plan for Training? How many projects are behind schedule, if any, and what are the main reasons for delays?

ANSWER: Flight Plan for Training activities and schedules were based on planned resource levels of $19.6 million (includes the requested supplemental) in FY 1989 and $41.1 million in FY 1990.

FY 1989 actual obligations for Flight Plan projects totaled $5.5 million. The funding shortfall delayed or extended 14 projects in FY 1989. Nine others were delayed due to contracting or planning problems.

In FY 1990, Congress cut $20 million from the Flight Plan during the regular appropriations review process. In addition, the Gramm-Rudman-Hollings sequester, the across-the-board drug offset, and the need to absorb fully the almost $70 million cost of the January 1990 pay raise required another $7.7 million reduction in Flight Plan funding. Thus, FAA has allocated $13.4 million for Flight Plan projects from the Operations appropriation. Lack of funding delayed three projects in FY 1990; one project was delayed by planning problems.

FAA gives highest priority to Flight Plan projects with a high-safety impact or greatest potential to reduce the overall cost of the agency's training program. This would insure implementation of projects such as:

- o Redesign of the Air Traffic curriculum
- o Pre-hire training of air traffic controller candidates
- o Reducing the length of the air traffic controller selection process
- o Redesign of the Aviation Security curriculum

SENATE LAUTENBERG: Has FAA prioritized the Flight Plan for Training projects? If not, does it plan to do so, and when will it be done?

ANSWER: Within the Flight Plan for Training, highest priority will be given to projects with the greatest safety impact or highest potential to reduce overall costs of the training program.

Within the context of the Flight Plan, our training priorities would be:

- o Redesign of the Air Traffic curriculum
- o Pre-hire training of air traffic controller candidates
- o Reducing the length of the air traffic controller selection process
- o Redesign of the Aviation Security curriculum

SENATE LAUTENBERG: A major part of the Flight Plan for Training involves the establishment of four Regional controller radar training centers estimated to cost $169 million. Why are these centers needed, and is FAA seeking funding for them in its FY 1991 request?

ANSWER: The radar training centers originally proposed in the Flight Plan for Training are no longer considered a valid requirement. As an alternative, we are exploring site-specific radar simulation which operates independently of the operational computer system. If successful, this approach would not only satisfy our current needs at a lower cost than the dedicated radar training centers, but offer the potential to serve as a bridge during the transition to the advanced automation system. If pilot projects prove this concept to be sound, we will address funding needs in our FY 1992 request. Funding for the radar training centers is not included in FAA's FY 1991 request.

SENATE LAUTENBERG: It is my understanding that you have said that FAA's training initiatives have suffered in the past because of budget restrictions. How much of the restriction was internal FAA, and how much was imposed from outside -- i.e., by the Department of Transportation, Office of Management and Budget, or Congress?

ANSWER: For FY 1989 Congress appropriated $7.5 million. Actual obligations for Flight Plan projects totalled $5.5 million. We were unable to allocate the full amount due to the need to fund increased nondiscretionary costs (e.g., salary, health insurance, etc.), and other pressing operational demands. Lack of funding delayed or extended 14 projects in FY 1989.

For FY 1990, OST and OMB supported an increase of slightly over $40 million. FY 1990 Operations appropriations bill language did not specifically identify Flight Plan for Training funding, but identified $20.4 million in funding for specific projects which are included in the Flight Plan against the $40 million request. Of that amount, we have allocated $13.4 million to Flight Plan projects. The appropriated level was further reduced by Gramm-Rudman-Hollings cuts, the Drug bill assessment, the requirement to absorb the pay raise, and other unbudgeted pay-related costs, and the need to provide additional funding for the centralized training program. The lack of funding has delayed three projects this fiscal year.

SENATE LAUTENBERG: When the previous administrator talked about this program, he indicated that it would virtually eliminate the trainee washout rate and reduce by one-half the time it takes to train a new controller. According to your budget justification, you are not projecting any reduction in your washout rate in fiscal year 1991. When might we expect to see some incremental improvements resulting from this program?

ANSWER: The new air traffic controller selection process (revised screen) will remove the screening process from Academy air traffic controller initial qualification training, reduce the time a new controller spends at the Academy, and enable the Academy to concentrate on training instead of screening. Air traffic controller applicants who qualify through the new selection process will have a better chance of successfully completing initial qualification training.

This project received initial funding in FY 1990, and a Request for Proposals for the required research is expected in June 1990. The procurement will be open and competitive, with contract award expected about January 1991. FAA anticipates that 3 to 4 years will be required to complete the work, with implementation to follow. This amount of time and effort is required to complete the work, with implementation to follow. This amount of time and effort is required for the research necessary to meet Federal (Uniform Guidelines for Employee Selection Procedures) and Office of Personnel Management regulations for selection systems, and to withstand the scrutiny of civil rights organizations, the National Air Traffic Controllers Association, and other interested parties. Our goal is to develop a selection system that will meet if not surpass all legal and Congressional challenges.

Incremental results should be visible as soon as candidates selected under the new system start and complete training. This may occur as early as 1994, but the main impact should be obvious in 1996 and 1997, as the developmentals selected under the new selection procedures progress in their careers to full performance level status.

Our parallel efforts within the Flight Plan for Training to develop and test private programs to train and screen air traffic controllers also has the potential for significantly reducing the agency's cost to train controllers.

TRAINING

SENATOR LAUTENBERG: The Inspector General (IG) reported that a contractor who was paid $600,000 to train controllers at your O'Hare Airport facility conducted only one course over a nine-month period. In fact, the IG report states that your personnel had to train the contract instructors as well as your own controllers.

How did this happen, and why was it allowed to continue for over nine months?

ANSWER: This happened because there were no transition plans, milestones, or deadlines in the contract requiring the contractor to fully assume training within a certain period of time.

The O'Hare contract program was an "add-on" to an existing contract. We had no reason to expect serious problems would occur at O'Hare.

The problems that occurred at O'Hare appeared to be, at first, routine problems which can be expected during any contract start-up.

When we realized that the problems were more serious (such as instructor recruitment), we exercised management changes and made improvement in contract oversight to ensure the same scenario does not happen again.

SENATOR LAUTENBERG: While you agreed with some of the IG recommendations, you did not agree with all of them. Why do you disagree with some of these recommendations, particularly the one regarding recoveries for nonperformance -- were you satisfied with the contractor's performance?

ANSWER: After reviewing the OIG final report, we amended our original position and did agree that most instructors should have experience in a similar facility. The OIG said that this would satisfy the intent of the recommendation. In addition, we agreed to limit the number of contract employees in the future should we expand contract training.

We do disagree with the recommendation to seek recoveries from the contractor. After consulting with the Office of Chief Counsel, we would advise the SBA not to seek recoveries. Again, there were no requirements in the contract - milestones, transition plans - for the contractor to follow. We have no legal basis to seek recoveries.

SENATOR LAUTENBERG: According to the IG, this contract did not: (1) include a date for the contractor to assume responsibility for the training functions; (2) limit the cost of providing training to contract instructors; (3) limit the number of contractor personnel; or (4) provide for proper review of the contractor's monthly status reports or vouchers.

Why was a contract written without such basic features?

ANSWER: Contract training at O'Hare was an "add-on," or a modification to an existing facility training contract.

The overall contract was proceeding satisfactorily, so we had no reason to expect that serious long-term problems would occur at O'Hare. Revisions to our process to prevent a similar incident from occurring in the future have been added.

SENATOR LAUTENBERG: This contractor, SRSA (Systems, Requirements, and Services Associates, Incorporated), has a multi-year training contract amounting to over $80 million.

Have you evaluated this contractor's performance at other facilities, and do you have any plans to phase out this contractor training?

ANSWER: We now evaluate contractor performance on a regular basis.

- Performance is evaluated through our full-facility evaluations conducted by the Office of System Effectiveness (ATH) at the time of each facility evaluation.

- The headquarters technical officer will periodically evaluate contractor performance at various facilities throughout each year. Evaluations were recently completed at four sites: St. Louis, Albuquerque, Indiana, and Miami.

- The FAA training managers at each site now have a procedure for identifying contractor performance deficiencies as an ongoing process.

Phase out: We are now in the process of preparing to competitively bid the contracts industry-wide. We are writing a performance work statement at this time, and we expect to award the new contract by early FY 1992.

FIELD MAINTENANCE STAFFING

SENATOR LAUTENBERG: For fiscal year 1991, you are requesting an increase of 415 FTEs for your field maintenance staff. However, according to your budget justifications, even with your proposed increase, your field maintenance staff will only be at 88 percent of your staffing standard.

Do you really need a larger increase? If so, why haven't you requested it and, if not, shouldn't you revise your standard?

ANSWER: Our staffing standard is used as a benchmark or guide to assist us in determining the proper staffing levels. Any well designed standard, such as ours, must assume standard or average skill levels, average pace, and an anticipated attrition rate. Judgment then must be used to apply this standard to a non-standard and constantly changing field maintenance work environment. Currently, we have a highly skilled, experienced, and dedicated work force working at an above average pace. In preparing the budget there was an inadvertent overstatement of the FTE requirement. The budget seeks funds for a total of 9,158, an increase of 225 over FY 1990. We, therefore, are requesting only 225 additional FTE's based on our judgment and past experience. This situation will, however, change over the next 3-5 years due to an anticipated higher attrition.

SENATOR LAUTENBERG: Please indicate for the record the total amount contained in your fiscal year 1991 budget for contractor maintenance.

ANSWER: There is $19,330,000 in our budget for contractor maintenance. The following is a list of the equipment we plan to maintain under contract in FY 1991.

Airport Weather Information System	$ 60,000
Computer Assisted Engineering Graphics	1,500,000
Maintenance of Printers (Lanham, MD)	9,735
Model I Flt. Service Automation System	1,346,000
Maintenance of Host Computer	3,858,165
Integrated Communications Switching System II & III	12,150,000
Cluster Controller in Headquarters	1,000
Maintenance Data Terminal	127,000
Maintenance of NOVELL LAN	30,000
Maintenance of Headquarters PC's	60,000
Tandem Computer	90,000
Maintenance of Traffic Management Unit	98,100
	$19,330,000

SENATOR LAUTENBERG: You seem to be moving more and more toward contractor maintenance. Do you have a long-term strategy for providing system maintenance? If so, what is it?

ANSWER: Our long term strategy is to evaluate each new NAS system and design a maintenance strategy that reflects the particular characteristics of that system. Factors considered include estimated system lifespan, number of locations, spare parts management and software maintenance issues, and others. We will also periodically reassess our maintenance strategies for existing NAS systems. As an interim measure to help us manage workload during the period 1992-1996, we plan to introduce a Field Maintenance Support Contract (FMSC) that will provide approximately 500 FTE's of annual contract support when fully implemented. This support will provide maintenance on older equipment while our current and newly hired technicians are trained on the newer equipment. Due to anticipated retirements in our veteran and highly skilled workforce over the next few years, a temporary staffing increase will be required. We could accommodate this requirement by hiring more FAA technicians, but the requirement is anticipated to end by FY 1996. At that point, much of the additional staff would no longer be required. With an FMSC contract in place, we merely review our workload requirements each year and adjust the contract as the situation dictates. In addition to the FMSC, we will continue our program of contract maintenance on specific systems, such as the HOST Computer, and the Integrated Communications Switching System.

SENATOR LAUTENBERG: What specific part of your budget addresses this problem? What total amount of contract funding do you anticipate is needed to assure the National Air Transportation System is not adversely affected?

ANSWER: Our budget submission provides $19,330,000 for Contractor Maintenance in the base level and 260 additional field maintenance positions. We believe that our submission provides adequate support of the National Air Transportation System and will provide the degree of safety we have always maintained.

SENATOR LAUTENBERG: At the system safety and efficiency reviews conducted by FAA over the past year and a half, the maintenance/technician staffing shortage problem surfaced and was verified by GAO. We understand the problem will become more critical since over 50 percent of the work force is eligible to retire by 1995.

What are your plans to address this critical problem, and when do you think you will have the problem resolved?

ANSWER: We believe that we can address the problem in FY 1991 with the additional positions and FTE's and the base level of contract maintenance represented in this request. This effort will enable us to meet both maintenance workload and training schedules during the period 1992-1996, despite heavy retirement through that period. We constantly review our workload requirements and will present our future requests with these needs in mind.

SENATOR LAUTENBERG: FAA plans to remedy its maintenance technician shortfalls, in part, by augmenting in-house capabilities with a field maintenance support contract. This contract is projected to cost $170 million over 5 years beginning in FY 1991. FAA also plans to hire about 2,350 technicians over the next three years and to continue contracting out maintenance for specific new NAS equipment at an estimated cost of $320 million through FY 1995.

Has FAA identified the facilities, locations, and job specialties in which private sector maintenance will be used to augment the existing maintenance technician work force?

ANSWER: The FAA is currently putting provisions for limited periods of contractual maintenance support in all of its major acquisitions. This will facilitate a smooth transition to FAA/long term contract maintenance for all major systems.

SENATOR LAUTENBERG: In contracting for maintenance support, what controls has FAA implemented to avoid the problems recently experienced in contracting for controller training at the O'Hare facility? For example, how does FAA know that contractors will be able to hire an adequate number of technicians, with the right specialties, in the right locations?

ANSWER: Based on retiree statistics, we have determined that an adequate number of fully qualified retirees will exist that would be willing to return to their previous jobs as contractor technicians for a short period of time (1 to 3 years). The contract will provide for full relocation reimbursement at locations where inadequate numbers of retired FAA technicians may be available.

SENATOR LAUTENBERG: How many contractors will be needed? Have any alternatives to contracting out been explored?

ANSWER: Our intent is to have one prime contractor who can supply us with the required pool of technician resources.

The only viable alternative is to bring back rehired annuitants at full salary. FAA does not currently have legislative authority to do this.

SENATOR LAUTENBERG: Will FAA's augmentation plan permit FAA to accomplish its workload while allowing the in-house work force to receive training on new NAS equipment in a timely manner?

ANSWER: Yes. This is one of the major reasons for pursuing the augmentation plan.

SENATOR LAUTENBERG: How will FAA's maintenance technician training program meet increased new hire and new system training demands?

ANSWER: As training requirements for new hire and new systems increase, the FAA will be able to meet these demands by implementing the following capacity enhancements in addition to FAA Academy training:

New hire training: (a) Increased utilization of regional training centers, (b) enhancement of Computer Based Instruction capabilities in field offices, (c) application of training equivalency methods for highly qualified recruits.

New system training: (a) Utilize contractor developed and delivered training courses, and (b) exercise contractor maintenance options on new systems for 1 and 2 year periods to reduce peak FAA technician training demands.

SENATOR LAUTENBERG: Some equipment is currently being maintained by contractors. What is FAA's long-term strategy for providing system maintenance? Does FAA plan to assume this responsibility in-house, or continue contracting out maintenance?

ANSWER: Our long term strategy is to evaluate each new NAS system and design a maintenance strategy that reflects the particular characteristics of that system. Factors considered include estimated system lifespan, number of locations, spare parts management and software maintenance issues, and others. We will also periodically reassess our maintenance strategies for existing NAS systems.

CONTROLLER WORK FORCE

SENATOR LAUTENBERG: Where do you stand regarding the development and implementation of your revised staffing standards and, based on these standards, how many controllers should you have in your centers and in your towers?

ANSWER: Revised standards for radar approach control facilities were completed a year ago. Standards for ARTCC's are in place, and were updated recently. We are in the process of developing revised standards for tower cab facilities, and standards for automated flight service stations. We expect both of these efforts to be completed within the next few months.

Our current staffing goal for controllers in FY 1990 is 17,000.

SENATOR LAUTENBERG: Please provide for the record a table showing controller work force end-of-year employment for fiscal years 1987 through 1991.

ANSWER: The table below provides controller work force end-of-year employment for fiscal years 1987 through 1991.

AIR TRAFFIC
STAFFING STATISTICS
1987 THRU 1991

FY 1987	15,433
FY 1988	16,436
FY 1989	16,832
FY 1990	17,000 *
FY 1991	17,495 *

* Estimates

SENATOR LAUTENBERG: If you reach your revised FPL goal for fiscal year 1991, you will have added only 1,252 FPLs in the past four years. Why are you continuing to have a problem adding to your FPL work force?

ANSWER: Although an increase of 1,252 FPLs over a four year period may appear to be a small increase, we now consider this to be the normal progression rate for obtaining FPL status. We believe that previously established FPL goals were overly optimistic and that approximately 300 additional FPLs per year is normal. Attrition and career progression have typically resulted in a large number of CWF reassignments from lower level facilities to higher level facilities, to managerial positions and to other staff positions. These actions adversely impact the FPL rate. For example, in FY 1991 we plan to reassign approximately 500 people from lower level facilities to a higher facility. Until these individuals are retrained in their new facility they lose their FPL status. The loss of FPL status ranges from six months at a small facility and up to two years at our larger facilities.

SENATOR LAUTENBERG: What are your respective tower and center FPL goals for fiscal year 1991?

ANSWER: Our current goal for FPLs in FY 1990 is to have 4,800 in our centers and 5,980 in our towers.

SENATOR LAUTENBERG: There is a 13-month slippage in the delivery of your initial sector suite system (ISSS). Are the additional 145 controllers that had been requested to implement ISSS now included in your fiscal year 1991 budget request?

ANSWER: The 145 controllers requested in the FY 1990 budget to implement ISSS are now included as part of the 495 controllers in the FY 1991 request.

SENATOR LAUTENBERG: Please provide for the record your current schedule for ISSS implementation, including the impact it will have on your controller staffing requirements for fiscal years 1991, 1992, and 1993.

ANSWER: Our preliminary estimate reflects that about 510 additional en route controller workyears, based on five additional workyears per area of specialization per facility, will be required during transition to the Initial Sector-Suite System (ISSS). This additional staffing would perform backup controller duties for those controllers receiving ISSS training, and therefore, the additional staff must be brought on board at least two full years before the ISSS training starts in order that they achieve operational status. We are currently studying to what extent this additional workload requirement can be met through contract services, use of overtime, or rehired annuitants.

The original staffing plan was to bring the additional staff on board over a three year period beginning in fiscal year 1990, with the bulk of the increase in the first two years (fiscal years 1990 and 1991). The Administrator's January 26, 1990, letter advised the Subcommittee that the need for this additional staffing will move out one year because of a 13-month slippage in the ISSS schedule. However, FAA now expects that the slippage will be extended up to 19 months. The following data reflects the latest field ARTCC ISSS implementation schedule and staffing requirements.

Initial Sector Suite System (ISSS) Implementation Schedule

Facility	Delivery	Training Starts	Operational Readiness Demonstration
Seattle	2/94	11/93	8/95
Atlanta	4/94	1/94	10/95
Chicago	6/94	3/94	12/95
Ft. Worth	7/94	4/94	1/96
Cleveland	8/94	5/94	2/96
Houston	9/94	6/94	3/96
Denver	10/94	7/94	4/96
Washington	11/94	8/94	5/96
Salt Lake City	12/94	9/94	6/96
New York	1/95	10/94	7/96
Kansas City	2/95	11/94	8/96
Minneapolis	3/95	12/94	9/96
Albuquerque	4/95	1/95	10/96
Oakland	5/95	2/95	11/96
Memphis	6/95	3/95	12/96
Los Angeles	7/95	4/95	1/97
Miami	8/95	5/95	2/97
Indianapolis	9/95	6/95	3/97
Jacksonville	10/95	7/95	4/97
Boston	11/95	8/95	5/97

Note: Training is assumed to begin with availability of common consoles for detached console training, which is planned to occur three months prior to delivery of rest of ISSS system.

SENATOR LAUTENBERG: According to your staffing standard, which facilities and centers have the most serious shortages?

ANSWER: Shortages exist in the nine pay demonstration air traffic facilities. In addition, shortages exist in other facilities, such as Boston Tower and Center, Indianapolis Center, New York area Towers (Kennedy, Newark, LaGuardia), Los Angeles

Basin facilities, Oakland Center.

SENATOR LAUTENBERG: From which facilities are you moving personnel, and what impact will that have on their staffing situation?

Please elaborate on your answer for the record, showing how the facilities to which you are moving personnel and those from which you are moving personnel compare with your staffing standard.

ANSWER: Through the first half of FY 1990, Air Traffic had completed a total of 651 moves. This included the movement of 167 personnel from FSS facilities to AFSS facilities in recent FSS consolidation efforts. In addition, there has been 51 moves from the center option, 372 from the terminals and 61 from regional and Washington headquarters. The movement of personnel from one facility to another is controlled to alleviate levying severe hardships on the operation and staffing requirements of the losing facility.

Actual on board staffing is currently 263 under our FY 1990 staffing standard level of 17,495. In an effort to realign the existing CWF work force in accordance with approved agency staffing standards the majority of our PCS program has been consumed by supporting understaffed facilities in the terminal option. Approximately 57 percent of total funding has been utilized in supporting terminal vacancies as the number of facilities supported in this option represents the largest segment in the Air Traffic program. As of March 30, 1990, we have reassigned 47 personnel to level II facilities, 84 to level III, 106 to level IV and 88 personnel to level V facilities.

SENATOR LAUTENBERG: The controller staffing goal for fiscal year 1990 was 17,495. Why did you ask for a waiver from the goal?

ANSWER: Several factors have changed our hiring requirements, thus lowering our controller work force targets:

- Lower Aviation Activity: Actual growth in air traffic activity is slightly lower than FAA had forecast, primarily because major carriers did not increase operations as anticipated and the Eastern Airlines strike reduced aviation operations in 1989. This decrease has a cumulative effect on projections for FY 1990 and beyond.

- Delay Initial Sector Suite System: Implementation of the Initial Sector Suite System (ISSS) is slipping because delivery of the software is delayed at least a year. This will allow FAA to defer hiring additional new controllers for transition to the ISSS, which were originally included in the FY 1990 President's Budget.

- More Emphasis on Moving Controllers to Where Needed: FAA has added almost 10,300 to its work force since the 1981 PATCO strike, but staffing efficiently involves moving qualified controllers to higher level facilities where they are needed. Budget constraints and cost absorptions during the past several years have severely limited the funding amount for these necessary moves. Therefore, some of the funds that were originally budgeted to bring on additional controllers will now be used to help cover shortfalls in permanent-change-of-station moves that were impacted by the absorption of other costs.

SENATOR LAUTENBERG: Since you will not achieve your staffing goals for 1990, what adjustments have you made to the controller training pipeline?

ANSWER: Due to the reduction of the controller work force (CWF) goal for FY 1990, the FAA has reduced the requirement from 3,564 initial hires to 2,120.

SENATOR LAUTENBERG: It is our understanding that you have reduced the number of trainees at the Academy from 2,900 in FY 1989 to about 2,100 in FY 1990. According to your own findings from the System Safety and Efficiency Reviews, controller staffing is still a major problem at many of your major facilities.

What are your intentions for FY 1991 regarding the controller training pipeline?

ANSWER: For FY 1991, we will need approximately 2,400 new hires trained at the FAA Academy to reach our target goal of a 17,495 controller work force by September 30, 1991. This will yield approximately 1,200 new developmentals into the field training pipeline.

SENATOR LAUTENBERG: In its report Aviation Safety: Facility Ranking of Controller Survey Responses (GAO/RCED-90-39, Nov. 21, 1989), GAO found that controllers are troubled by working conditions at air traffic control facilities. The extent of their concern varies between facilities and on the basis of specific working conditions.

Moreover, the Secretary of Transportation requested a waiver from statutory requirements that by the end of FY 1990 FAA must attain an overall controller work force of 17,495, of which 12,725 must be FPL controllers. While meeting the FPL level has consistently been a problem for FAA to meet, it had met -- until now -- the overall controller work force goal.

What criteria does FAA think ought to be used to measure its progress in rebuilding this critical work force? Using your criteria, describe the progress FAA has made in rebuilding the controller work force. How many FPLs are needed, and when does FAA expect to achieve this goal?

ANSWER: The annual growth rate for the controller work force and FPL level has continued to increase substantially each year since the strike. The agency does not and cannot hire FPL's. People are hired and committed to a lengthy training process which can take up to two and a half years. The controller training process limits the number of employees who can be optimally trained at any one time. The maximum number of students who can be trained at any one time. The maximum number of students who can be trained is limited by classroom and laboratory capacity, the number of operational positions available, etc.

In August 1981, employment was at an all time low of 6.575 percent and the FPL total was 4.745 percent. As of the end of April 1990, employment was 17.232 percent and FPL was 10.422 percent. Pragmatically, about the highest FPL staffing goal would be about 70 percent of the controller work force since the pipeline must be kept flowing at all times to backfill for the various types of attrition, relocation of employees among facilities, transfers and promotions to specialist or managerial jobs.

PAY DEMONSTRATION PROJECT

SENATOR LAUTENBERG: The pay demonstration project is to enhance the ability of FAA to recruit and retain experienced qualified employees in designated occupations at certain hard-to-staff facilities.

How many employees received pay increases and, of those, how many were personnel that were already assigned to that facility and how many came from other facilities?

Please elaborate on your answer for the record, showing the facilities from which personnel transferred and the number that transferred from each.

ANSWER: Of the 2,202 employees currently in the project, 1,932 were on board when the project was implemented, and 136 have transferred into one of the covered facilities from another FAA facility. An additional 134 have been added to the facilities as new hires from the FAA Academy, other Federal agencies, or the private sector.

The facilities from which personnel have transferred to the covered sites are:

New York Center	Number of Employees
Eastern Region Air Traffic Division	3
Houston Center	1
Indianapolis Center	2
Islip (NY) Automated Flt Svc Sta.	1
Kansas City Center	1
New York TRACON	1
Rochester Tower	1
Raleigh/Durham Tower	1
Salt Lake Center	1
White Plains Tower	1
Total	13
New York TRACON	
Albany Tower	1
Bakersfield (CA) Tower	1
Danbury (CT) Tower	2
Farmingdale (NY) Tower	2
JFK Tower	2
LaGuardia Tower	3
Long Island (Islip, NY) Tower	2
Total	13
Chicago Center	
Albuquerque Center	1
Boston Center	1
Chicago O'Hare TRACON	1
FAA Academy	1
Great Lakes Region Air Traffic Division	1
Kansas City Center	1
Los Angeles Center	1
Total	7

O'Hare Tower

Albuquerque Tower	1
Detroit Metro Tower	1
Dupage (IL) Tower	1
Grand Rapids (MI) Tower	1
Oakland Center	1
Midway Tower	1
Salt Lake City Tower	2
Total	8

O'Hare TRACON

Charlotte Tower	1
Chicago O'Hare Tower	2
Columbus Port	1
Dayton Vandalia Tower	1
Denver TRACON	1
Des Moines Tower	2
Detroit Metro TRACON	1
Dupage Tower	1
Great Lakes Region Air Traffic Division	1
Houston Center	1
Indianapolis Center	1
Kalamazoo (MI) Tower	1
Las Vegas Tower	1
Lincoln (NE) Tower	1
Los Angeles Center	1
Memphis Tower	1
Palm Beach Tower	1
Rochester (NY) Tower	1
San Juan CERAP	1
Springfield (IL) Tower	1
St. Louis TRACON	1
Total	23

Bay TRACON

Honolulu Tower	1
Indianapolis Center	1
Kansas City Center	1
Las Vegas TRACON	2
Livermore (CA) Tower	1
Monterey Tower	1
Moline (IL) Tower	1
Oakland Center	2
Western-Pacific Region Air Traffic Div.	1
Total	11

Coast TRACON

Abilene Tower	1
Anchorage Center	1
Bakersfield Tower	1
Boston Center	1
Dallas/Ft. Worth TRACON	1
Moline (IL) Tower	1
Oakland Center	2
Orange County (CA) Tower	2
Palm Springs Tower	1
Sacramento TRACON	2

Salt Lake Center	1
Waterloo (IA) Tower	1
Wichita Tower	1
Total	16

Los Angeles Tower	
Aspen (CO) Tower	1
Burbank Tower	1
Casper (WY) Tower	1
Fullerton (CA) Tower	1
Long Beach Tower	1
Los Angeles TRACON	2
Renton (WA) Tower	1
Santa Barbara Tower	1
Van Nuys Tower	1
Western-Pacific Region Air Traffic Div.	2
Total	12

Los Angeles TRACON	
Coast TRACON	1
Los Angeles Center	3
Maui (HI) Tower	1
Monroe (LA) Tower	1
Oakland Center	1
San Diego Tower	1
Waterloo (IA) Tower	1
Total	9

New York Center Airway Facilities Sector	
Islip (NY) Sector Field Office	1
Total	1

New York TRACON Airway Facilities Sector Field Office	
Metro Sector (NY) Airway Fac. Sector	1
Eastern Region Airway Facilities Div.	1
Total	2

Chicago Airway Facilities Sector	
Illinois Airway Facilities Sector	2
Great Lakes Region Airway Facilities Div.	1
Chicago Center Airway Facilities Sector	1
Wisconsin Airway Facilities Sector	1
Bismarck Airway Facilities Sector	1
From non-covered positions within fac.	3
Total	9

Bay TRACON Airway Facilities Sector Field Office	
Golden Gate Airway Facilities Sector	1
Total	1

El Toro (Coast TRACON) Airway Facilities Sector Field Office	
Mirimar (CA) Sector Field Office	1
San Diego Airway Facilities Sector	1
Milwaukee Airway Facilities Sector	1
Total	3

Los Angeles Airway Facilities Sector	
St. Louis Airway Facilities Sector	1
Burbank Sector Field Office	1
Total	2

New York Flight Standards District Office	
Boston Flight Standards District Office	1
Teterboro (NJ) Flt. Standards Dist. Ofc.	1
Pittsburgh Flt. Standards District Ofc.	1
Total	3

Teterboro Flight Standards District Office	
Harrisburg Flt. Standards Dist. Ofc.	1
Farmingdale (NY) Flt. Standards Dist. Ofc.	1
New York Flt. Standards District Ofc.	1
Total	3

SENATOR LAUTENBERG: Can you provide a comparison of current staffing levels with those existing before the pay demonstration project started for each facility in the project?

ANSWER: The comparison follows:

	Staffing Level as of	
Facility	March 1990	June 1989
New York Center	403	368
New York TRACON	224	226
Chicago Center	540	532
Chicago O'Hare Tower	55	59
Chicago O'Hare TRACON	105	94
Bay TRACON	102	96
Coast TRACON	90	80
Los Angeles Tower	46	40
Los Angeles TRACON	72	73
N.Y.Center Airway Facilities	91	95
N.Y. TRACON Airway Facilities	56	56
Chicago Center Airway Facilities	86	91
Chicago O'Hare Airway Facilities	85	85
Bay TRACON Airway Facilities	24	24
Coast TRACON Airway Facilities	11	11
Los Angeles Airway Facilities	60	63
Farmingdale Flight Standards Office	22	17
New York Flight Standards Office	48	43
New York Manufacturing Inspection	5	5
Teterboro Flight Standards Office	35	25
Teterboro Manufacturing Inspection	3	4
Los Angeles Flight Standards Office	39	41
Total	2,202	2,128

SENATOR LAUTENBERG: What are the costs of this project for fiscal years 1991, 1992, and 1993?

ANSWER: The estimated costs of the project are:

FY 1991	$22.4 million
FY 1992	$23.3 million
FY 1993	$24.2 million

SENATOR LAUTENBERG: For the record, detail the facilities involved in the pay demonstration program, the number of personnel involved by facility.

ANSWER: There are 11 facilities included in the project, encompassing 22 organizational components:

1.	New York Air Route Traffic Control Center	403
	New York Center Airway Facilities Sector	91
	Ronkonkoma, New York	
2.	New York Terminal Radar Approach Control	224
	N.Y. TRACON Airway Fac. Sector Field Office	56
	Westbury, New York	
3.	Farmingdale Flight Standards District Office	22
	New York Manufacturing Inspection District Office	5
	Farmingdale, New York	
4.	New York Flight Standards District Office	48
	Valley Stream, New York	
5.	Teterboro Flight Standards District Office	35
	Teterboro Manufacturing Inspection District Office	3
	Teterboro, New Jersey	
6.	Chicago Air Route Traffic Control Center	540
	Chicago Center Airway Facilities Sector	86
	Aurora, Illinois	
7.	Chicago O'Hare Air Traffic Control Tower	55
	Chicago O'Hare Terminal Radar Approach Control	105
	Chicago Airway Facilities Sector	85
	Chicago, Illinois	
8.	Bay Terminal Radar Approach Control	102
	Bay TRACON Airway Fac. Sector Field Office	24
	Oakland, California	
9.	Coast Terminal Radar Approach Control	90
	Coast TRACON Airway Fac. Sector Field Office	11
10.	Los Angeles Int'l Air Traffic Control Tower	46
	Los Angeles Terminal Radar Approach Control	72
	Los Angeles Airway Facilities Sector	60
	Los Angeles, California	

11.	Los Angeles Flight Standards District Office Los Angeles, California	39
	Total	2,202

SENATOR LAUTENBERG: Are there plans to expand project coverage to other facilities? If so, which facilities and positions will be included, and what is the basis for their selection?

ANSWER: At this time, we do not have any plans to expand the project to cover other facilities or occupations.

SENATOR LAUTENBERG: Last year, you implemented a pay demonstration program to locate experienced controllers and maintenance technicians at hard to staff facilities. We understand you had problems implementing the program because of a shortage in permanent change of station money to allow people to relocate to those locations.

Will you have sufficient money to allow these transfers to occur in the future?

ANSWER: Relocating personnel to pay demonstration facilities is considered to be one of the highest priority items when considering agency permanent change-of-station (PCS) funding availability. Accordingly, there should be adequate PCS funding for pay demonstration facilities in the future.

NEW YORK TRACON

SENATOR LAUTENBERG: We understand that air traffic delays at LaGuardia and JFK Airports have doubled in the first 5 months of FY 1990. Can you tell us what the FAA is doing to respond to this situation?

ANSWER: During the period of March 26-29, 1990, the Eastern Region air traffic division conducted a special traffic management evaluation of the New York Terminal Radar Approach Control (TRACON).

On April 12, 1990, the New York TRACON Procedural Review Committee was established, funded by overtime, to release personnel to work on procedures. On May 14, 1990, the committee reported their findings which included 11 proposed route changes to reduce the impact of overflight traffic over the LaGuardia airport.

LAGUARDIA

A program of exchange visits with traffic management specialists from the LaGuardia tower and the New York TRACON has been established. These visits, one week for each specialist, are designed to improve communications and provide understanding of others areas of responsibility.

On April 20, 1990, the Eastern Region air traffic division conducted a one day evaluation at LaGuardia tower. On May 29-31, 1990, a followup evaluation of the traffic management unit will be conducted.

The New York Port Authority has approved a project to construct a high speed taxiway from runway 22 to the Pan Am and general aviation areas located on the north side of the airport. This project, when completed, will reduce runway occupancy time and eliminate the current need for aircraft landing runway 22 to utilize the entire runway length or exit the runway to the left and then recross the runway to their parking area, which currently increases controller workload and complexity. The Port Authority has not provided a schedule for this project.

The Port Authority has also approved a project to widen taxiway "M" which will increase capacity by providing additional access for runway 31 departures. The Port Authority has not provided a schedule for this project.

On June 12-15, 1990, the Eastern Region will participate in a traffic management meeting in Atlanta along with traffic management personnel from the New York, Washington, Jacksonville and Miami ARTCC's to discuss revising the north-south traffic flows along the east coast. The goal of this meeting is to reduce miles in trail restrictions currently being imposed on south bound traffic from the New York area due to compression occurring in airspace as aircraft traverse southerly along the east coast.

JFK

On May 8, 1990, an arrival fix balancing program was implemented to reduce overload at one arrival fix.

JFK departures fixes to Europe have been increased from one to three fixes.

The Eastern Region is working with Boston ARTCC to explore the possibility of issuing oceanic clearances while aircraft are on the ground at JFK airport. This clearance, currently issued by the Boston ARTCC controller while the aircraft is airborne, is lengthy and causes the Boston controller to impose restrictions on departures to allow sufficient time to issue the clearance.

The Eastern Region has proposed to the New York Port Authority, a runway 22 fan departure procedure which would increase departures by five operations per hour.

The Microwave Landing System (MLS) is scheduled to be operational by late summer or early fall. This will increase capacity when operating on runway 13 (normally a bad weather operation) by providing lower approach minimums for runway 13R which, in turn, provides an additional runway for landing aircraft when operating in this configuration. Additional arrival capacity should also be realized by removing the small aircraft from the jet flow.

The Eastern Region is reestablishing the parallel monitor program for JFK. This simultaneous parallel monitor will be initially established for runway 31 L/R, and possibly runway 22 L/R. Additionally, we plan to develop the parallel monitor for use with the ILS runway 13L and the MLS runway 13R (when established). We anticipate this program will be operational by September.

SENATOR LAUTENBERG: How successful has the Pay Demonstration project been in attracting experienced controllers to New York TRACON?

ANSWER: The project has been very successful in attracting experienced employees to the New York TRACON. Since the project was implemented, a total of 27 controllers have transferred to the TRACON from other FAA facilities. Five other entry-level controllers have been selected from the FAA Academy, and two former FPL controllers have been reinstated.

In addition, 13 controllers have been selected for positions at the TRACON but have not yet reported.

SENATOR LAUTENBERG: To what extent has the lack of PCS funds hampered your efforts in New York?

ANSWER: Lack of PCS funding has not yet hampered our "operational" capability in New York. In determining the distribution of limited PCS funding, New York Center and New York TRACON (our pay demonstration facilities in NY), have received adequate PCS funds. However, other facilities are beginning to feel the effect of the constrained PCS program. In some cases, key positions have been vacant for extended periods of time and career progression has been slowed. In addition, the inability to relocate qualified personnel to our busiest facilities will result in increased overtime usage.

SENATOR LAUTENBERG: Is the training program in New York TRACON adequate to handle an influx of experienced controller transfers and academy graduates?

ANSWER: The New York TRACON has a complete four-scope Enhanced Target Generator (ETG) laboratory that can handle the influx of experienced controllers and academy graduates.

New York TRACON provides their own "site-specific" radar training at the facility. One training specialist from each area of operation is used to conduct this training.

SECURITY

SENATOR LAUTENBERG: A great deal of emphasis in the FAA security program has been placed on detecting bombs in luggage. In view of the fact that five of the last seven bombs have been brought on board the aircraft by passengers, could you describe the recent progress that has been made in the area of the walk-through bomb detector?

ANSWER: Significant progress has been made in the last year on the vapor detection walk-through system. The experimental prototype, which has been developed by Thermedics, has shown increased sensitivity in limited laboratory tests. Under some circumstances the system can detect plastic explosives hidden beneath a layer of clothing. It is not a walk-through, however, but rather a booth that can screen no more than two passengers per minute. There are other technologies under development for portals; mass spectroscopy at Oak Ridge, Tennessee, (Department of Energy Facility) and electron capture and ion mobility with Ion Track Instruments and Sandia National Labs. All are currently receiving funding, and the Ion Track prototype will be tested in 1991.

SENATOR LAUTENBERG: What must be done to complete the walk-through system?

ANSWER: The FAA plans are to have an independent Government facility test and evaluate the Thermedics booth when the contractor indicates it is ready for shipment. Tests will include sensitivity and selectivity measurements on thousands of people in an operational scenario looking for explosives under various layers and types of clothing. If the tests prove positive, then additional R&D effort will be needed for ammonium nitrate explosive detection capability, as well as enhanced throughput rate. It is currently far too slow to be utilized in airports. In addition, the booth has not been fully engineered as a reliable and rugged machine, which can be successfully maintained in an airport environment. Finally, when the system is completed from an engineering standpoint, it must be subjected to rigorous performance testing.

SENATOR LAUTENBERG: Given the current state of the walk-through bomb detector, how long will it take and what level of funding will be required to complete the device?

ANSWER: We feel that completion of the walk-through may require $6 million over a 3-year period. With that level of effort, we would expect to detect all of the necessary explosives, but the processing speed per individual portal will probably not exceed five passengers a minute.

SENATOR LAUTENBERG: A major component of the FAA security program was the required installation of explosive detection systems. How many TNA (thermal neutron analysis) devices have been installed, and what is your schedule for installation of additional detection systems? Are you satisfied with this technology?

ANSWER: As you know, FAA has purchased six TNA explosive detection systems which are to be installed at various airports in the U.S. and abroad to gather operational information during a one year demonstration program. To date (May 17), two of the systems are installed and screening checked passenger baggage. One system is operating at a TWA facility at Kennedy International Airport and the other is located at Miami International Airport and is being used by Pan American. A third system was shipped to London on May 1, 1990, and is presently being installed in the south terminal at Gatwick Airport. We expect it to be assembled, calibrated and tested by British authorities by the end of June and ready for screening in July. The fourth system is scheduled to be shipped to Dulles International Airport as soon as negotiations with United Airlines concerning insurance are completed. System five is planned for Frankfurt, Germany subject to final approval by the government of the Federal Republic of Germany. The site for system six has not yet been selected but a list of candidate airports has been prepared and a selection is imminent.

A decision on the scheme to be used for requiring the deployment of additional explosive detection systems will be made after FAA has received studies being conducted by Sandia Laboratories, the Air Transport Association, the Congressional Office of Technology Assessment, and the National Academy of Sciences.

At the present time, TNA is the only explosive detection system that can automatically detect plastic explosives. The present system was designed to detect a specific amount of plastic explosive. This same system is capable of detecting smaller amounts of explosives but the penalty is a higher false alarm rate. We would, therefore, like to see the technology improved to reduce that false alarm rate while maintaining its detection capability. In the meantime, we continue to fund research, at greatly increased levels, in alternative explosives detection technologies.

SENATOR LAUTENBERG: Last year, we were told that the one TNA manufacturer could produce at least 50 units per year. Will they be able to meet this production level and are there other manufacturers producing explosive detection systems that meet the criteria established by your rule?

ANSWER: The manufacturer, Science Applications International, has advised us that they could produce 50 machines per year, once they were assured of sufficient orders to justify that production rate.

To our knowledge there are no other manufacturers producing any explosive detection systems that meet present FAA criteria. However, three organizations are conducting privately funded efforts with TNA technology. One of these companies claims they will have a prototype for airport testing this year.

SENATOR LAUTENBERG: How are the TNA systems performing -- what is the false alarm rate, how long does it take to screen each bag, etc.?

ANSWER: The TNA systems now being produced were designed several years ago to detect, with a certain level of probability, a given amount of explosives with a limit on the number of false alarms. The system performance standards also called for a throughput of at least 10 bags per minute.

For security reasons, it would not be appropriate, in a public document, to reveal the quantity of explosives the system is designed to detect. Based on the screening of over 65,000 bags to date, we can say that our experience at JFK has been satisfactory with the present technology and the amount of explosives the machine is calibrated to detect. We have experimented with the system and performed meaningful tests with significantly smaller amounts of explosives. Although we can obtain comparable detection rates, we do incur a higher false alarm rate. The system operates at the specified 10 bags per minute.

In summary, the TNA system is the first and only explosives detection system to meet FAA's criteria for detection rate, false alarm rate, and ease of use. It is capable of detecting all known commercial explosives, including plastic explosives.

SENATOR LAUTENBERG: Based on your experience to date, what is your assessment of the total number of systems that will be required?

ANSWER: The FAA has developed a range of deployment strategies. The top end of that spectrum is a deployment of an estimated 159 systems at, roughly, 40 airports over a period of two years. Prior to adopting any deployment strategy, the agency will closely examine analyses from the Air Transport Association, the Office of Technological Assessment, and the National Academy of Sciences, all of which are due by July.

SENATOR LAUTENBERG: There was a dispute about radiation liability insurance that delayed the installation of a TNA device at Miami International Airport. Do you expect to be confronted with this problem at other locations?

ANSWER: Our past experience indicates that this issue will continue to arise at other locations. Airlines and airport authorities do not carry insurance that covers the perceived risks associated with TNA and they therefore are looking for indemnification from the manufacturer. Since the TNA is a new technology, insurance underwriters are unsure of the risk and either do not want to write policies or are charging large premiums until more experience is gained with the system. Additionally, each airline or airport has asked for additional assurances, embellishing on agreements made at a previous site. The insurance issue has been one of the most important non-technical lessons learned thus far in the demonstration program.

SENATOR LAUTENBERG: As I understand it, under your rule, purchase by the airlines of these systems would be financed by a surcharge on tickets. What is the status of this surcharge?

ANSWER: It is intended that the purchase of explosives detection systems be financed from revenues produced by the aviation security surcharge. In the spring of 1986, international air carriers operating to and from the United States were granted tariff approval to add a security surcharge of up to $5.00 to cover the additional cost of providing enhanced passenger security measures. This surcharge is in addition to all other charges added to air fares. Five U.S. airlines (American, Continental, Delta, Pan Am and TWA) imposed that surcharge.

Last year, permission was granted to American, Pan Am and TWA to increase this surcharge to $7.50 each way. Eastern, Northwest and United Airlines have joined the others in security surcharges as appropriate for their operations. However, transatlantic security surcharges have remained at $5.00. Surcharges for Western Hemisphere traffic vary widely. For example, at the high end American Airlines assesses $10.00 surcharge one way from Jamaica, while Delta Assesses $2.00 each way for travel to and from the Bahamas.

No requirements exists for the airline industry to report security surcharge financial data to the U.S. Government. The Department of Transportation conducted a survey through the Air Transport Association (ATA) to learn how much money is collected via the surcharge and exactly how it is spent on security, after you asked that question on March 14, 1989. Most airlines have said they do not have that information or their accounting systems cannot readily produce it.

In a letter dated April 13, 1990, the Security of Transportation asked the ATA once again for help in finding out exactly how this money is spent. In a letter dated May 11, 1990, ATA President Aaronson replied: "I am sorry that the accounting systems of some airlines have precluded ready submission of information in the detail desired. While we can do the additional work that is required to develop the information requested, we would prefer not to do so unless it is truly necessary... we do know that, in the aggregate, revenues generated by the surcharges during 1986, 1987 and 1988 totalled $86.8 million, and costs of the extraordinary security measures during the same period totalled $98.7 million."

SENATOR LAUTENBERG: How many countries currently have implemented security requirements similar to those imposed on U.S. air carriers? If they haven't, are any additional actions planned?

ANSWER: All developed nations, including the 162 sovereign states who are parties to the Convention on International Civil Aviation (the Chicago Convention), have aviation security programs that are, in varying degrees, similar to those imposed on U.S. air carriers. The nations of Western Europe, in particular, have stringent security requirements that are very close, if not a mirror image, of U.S. requirements. The Government of Israel, in contrast, imposes security requirements that are even more rigid.

The primary difference between U.S. and other nations' approaches to aviation security is that we require the airport operator to provide a secure operating environment and require the air carrier to ensure that passengers, baggage, and cargo have been screened in accordance with its security program and that access to its aircraft is controlled. In other nations, these latter security services are provided by the government.

At certain foreign airports, we require air carriers to implement additional security measures beyond those provided by the local governments. We have thoroughly analyzed the risk presented at these airports and determined that the level of security provided by the local governments may not meet our perceived threat. Since we have no authority to direct them to provide additional security, we have, in carrying out our responsibilities to the traveling public, required U.S. carriers to implement the additional measures.

We are continually striving, as active members of various working groups of the International Civil Aviation Organization, to increase the level of security required through international aviation security standards and recommended practices. Also, the FAA is an active participant in bilateral aviation agreement negotiations to ensure that aviation security clauses are included.

SENATOR LAUTENBERG: Where do you stand with regard to implementation of your regulation requiring the installation of security systems to limit the access airport workers have to aircraft and baggage areas?

ANSWER: Federal Aviation Regulations, Section 107.14, Access to Secured Areas of Airports, of which you speak, became effective on February 8, 1989. This regulation does not limit the access of airport workers to their work place. The intent is to prevent unauthorized persons' access to restricted areas. Approximately 71 airports were required to have amendments submitted to FAA for approval by August 8, 1989, and another 200 airports were required to do so by February 8, 1990. All amendments have been received by the FAA. As of May 4, 1990, approximately 81 of the 271 airports (29.9 percent) have had their amendments approved. At this time, three airports have their automated systems in place and working. Depending on its volume of activity, each airport is allowed between 18 and 30 months, after its amendment has been approved, to have its access control system operational.

SENATOR LAUTENBERG: One of the actions that was announced following Pan Am 103 was the assignment of additional FAA security specialists to selected locations throughout Europe and the Middle East.

How many more FAA security specialists are currently working on overseas airports assessments than there were a year ago?

ANSWER: As of May 22, 1990, our onboard overseas staffing remains at 13, the same as last year. However, FAA is increasing the permanent security personnel in Europe, Middle East, and Africa to a total of 41 overseas positions--3 times the level in

FY 1989. FAA has received final Department of State approval to fill 14 positions; four of which are planned to have incumbents report in the country beginning in late May and continuing through June. Department of State approval for the remaining positions is still underway.

The additional overseas staffing will allow FAA security specialists to develop and benefit from improved professional relationships and inspection continuity. Foreign assessment teams will be primarily comprised of permanent overseas personnel rather than relying on Continental United States (CONUS) security personnel. Previously, assessment teams had frequently been comprised of CONUS personnel.

SENATOR LAUTENBERG: What is your assessment -- how satisfied are you with aviation security in these regions and the actions taken by countries in these regions to improve security?

ANSWER: We have been generally very gratified by the level of interest and cooperation in aviation security demonstrated by foreign governments. All governments are vitally concerned that there be no perception of failure on their part to provide adequate security for air travelers; therefore, they have been, in every instance, very receptive to any suggested improvements.

The Europe, Africa, and Middle East Office covers a very large area of the world and includes countries with very mixed circumstances. There are countries with security systems as developed as anywhere in the world with large security budgets and excellent training and which are very, very security conscious. At the other end of this spectrum are countries with severe limitations--funds, expertise, stability, and consistency. These countries need assistance. We are taking action, through the International Civil Aviation Organization (ICAO) and in concert with other nations, to provide to the developing countries assistance they need to ensure a minimally acceptable level of civil aviation security. The FAA has also been very active in providing technical assistance to such countries and assisting the Department of State in coordinating and supporting projects under the Anti-Terrorism Assistance Program. Meanwhile, we continue to assess the security of the airports from which foreign air carriers fly directly to the United States, and at which U.S. air carriers operate, to determine adherence to ICAO standards. At any time we are in doubt as to the adherence to those standards, action will be taken in accordance with the provisions of the International Security and Development Cooperation Act of 1985, Public Law 99-83.

SENATOR LAUTENBERG: What are your priorities in the security area?

ANSWER: Of course, the first priority of the FAA is to ensure the safety and security of the traveling public. To do this we must have highly motivated, fully trained security personnel with the tools needed to do their job. We must provide them with well-defined and effective security procedures, and we must provide adequate supervision to ensure that they are properly discharging their responsibilities. Beyond these necessary general priorities we need to:

a. Obtain approval for and position Civil Aviation Security Inspectors and Liaison Officers at all of those overseas locations considered operationally necessary.

b. Increase staffing to the requisite number of specialists necessary to respond quickly to deficiencies in the security system, and to act proactively to prevent criminal acts against civil aviation.

SENATOR LAUTENBERG: You are requesting 164 additional security positions, of which 128 are special agents that will be assigned to your security offices. How was this level determined? What will they be involved in?

ANSWER: The increase of 164 additional security positions includes 130 special agents for domestic and overseas assignments, and 34 technical and support positions. The increases were developed from the results of the Civil Aviation security staffing standards study.

One hundred twenty-eight (128) positions are requested for special agents at regional and overseas security offices. The additional staff will allow FAA to expand the use of Federal Air Marshals on U.S. carriers operating overseas as well as increase the level of foreign airport assessments, U.S. air carrier inspections overseas, and domestic air carrier and airport inspections.

Two (2) special agent positions are required in Washington headquarters to provide liaison and intelligence coordination between the FAA and various other U.S. intelligence agencies and organizations.

Of the 34 additional support personnel, 27 administrative/clerical positions will be distributed to the field and seven will be located in the Washington office of Civil Aviation Security. These positions will support new and already established special agent positions.

SENATOR LAUTENBERG: Have any flights been canceled during the past year by either the airlines or the federal government because of security reasons?

ANSWER: During the recent political upheaval in Haiti, American Airlines and Pan American World Airways cancelled their operations from Port-au-Prince for approximately one month. The FAA has not directed any flight cancellations for security reasons but would not hesitate to do so should the need arise.

SENATOR LAUTENBERG: What is your position on notifying the public of bomb threats?

ANSWER:

o There are 600 or more bomb threats against civil aviation in the United States per year.

o FAA believes such threats are most effectively handled by security professionals who are in a position to implement countermeasures.

o If the threat is specific, credible, and cannot be countered, the flight will be canceled.

o Publicizing threats may be counterproductive to the security process and would focus undue attention on information of questionable reliability.

o Public dissemination of such information could enable terrorists, criminals and the mentally ill to exploit the situation by making it possible for them to divert security resources or repeatedly disrupt air operations with a phone call.

o Accordingly, we believe bomb threats should not normally be publicized, although in some specific cases the passengers on a particular flight may be informed when the flight is cancelled.

CIVIL AVIATION SECURITY

SENATOR LAUTENBERG: Your request shows that civil aviation security personnel are used for a variety of duties, some of which have no bearing on the security of airports and air carriers.

Why are duties such as investigations of employee misconduct and thefts of FAA property as well as other functions not associated with airport and air carrier security, the responsibility of this staff, especially when we need more staff to inspect airports' and air carriers' compliance with security requirements?

ANSWER: The duties of the Civil Aviation Security personnel are many and diverse; however, the purpose and goal of the efforts that result from the performance of these duties is to enhance air safety. Civil Aviation Security Special Agents are trained in the "generalist" concept so as to make maximum use of our limited resources.

As a generalist, the FAA Special Agent is qualified to perform the duties required to meet the demands of the FAA security mission and function. These duties include the conduct of security inspections of airports, air carriers, and FAA facilities as well as the conduct of investigations of alleged violations of Federal Aviation Regulations (FAR's) that include certificated airmen, registered aircraft, airports, and air carriers. The investigators' responsibility also includes investigation of rule and regulation violations by FAA employees, all of whom support the mission of air safety.

Airport and Air Carrier security inspections are given priority in operational work assignments with emphasis on the critical need to maintain security plan compliance.

SENATOR LAUTENBERG: What qualifications are needed by applicants for civil aviation security inspector positions?

ANSWER: At the entry level civil aviation security inspectors are required to either (1) pass a written examination which includes job specific questions and an Individual Achievement Record which evaluates how well individuals have used the opportunities they have had in school, work, and outside activities; or (2) be a college graduate in a related field and have a grade-point average of 3.5 or above, on a 4.0 scale, or have graduated in the upper 10 percent of their class.

More experienced inspectors are required to have a minimum of one year of experience as a compliance inspector, investigator, analyst, or planner performing such activities as investigations involving interviews and review of records; evaluating investigative reports to determine the appropriate legal action; and advising and negotiating with persons or organizations subject to regulations.

SENATOR LAUTENBERG: How does FAA measure the effectiveness of its aviation security program?

ANSWER: The effectiveness of the Civil Aviation Security program is measured through a continuous inspection process and an evaluation of the results. We continuously monitor the degree of compliance of various regulated parties (e.g., domestic and foreign airports, domestic and foreign air carriers, airmen, hazardous materials carriers, etc.) with Federal Air Regulations and with Federal Aviation Administration directives dealing with the security program.

SENATOR LAUTENBERG: What is the relationship of the workload measures in the budget request to that set of measures?

ANSWER: The workload indicators in the budget request are planned activities within the security program. These activities are tracked through the Civil Aviation Security Information System. This is the first step of the evaluation process in that our program managers can determine if a planned activity (e.g., a foreign airport assessment) has been accomplished. It is through these activities that we determine whether regulated parties are complying with the various security program regulations and directives.

FEDERAL AIR MARSHALS

SENATOR LAUTENBERG: Does FAA have a written policy governing the use of firearms by Federal Air Marshals during an in-flight event where shooting may be necessary?

ANSWER: Yes, FAA Order 1650.1A, Federal Air Marshal Program.

SENATOR LAUTENBERG: If so, when was it formulated?

ANSWER: The written policy of the FAA governing the use of force has remained the same since the issuance of Order 1650.6A, Federal Air Marshal Program, in November 1981. Specifically, the force used in subduing or restraining a hijacker or suspected hijacker must be in direct proportion to the situation requiring the use of force. Deadly force should be used only when the lives of the crew, or passengers, or the Federal Air Marshal are in imminent jeopardy (life threatening). The safety of the aircraft must also be considered and quickly evaluated before a firearm is used.

This policy was reviewed and concurred with by the Department of Justice and the State Department in 1985. They did not recommend that any rewrite of the Order include a definition of "probable cause" and the current rewrite of the Federal Air Marshal Program Order (1650.6B), written in coordination with the FAA's Office of Chief Counsel, has further defined the policy by including the definition of "probable cause" as it relates to the Federal Air Marshal. This Order is expected to be published in early July 1990.

SENATOR LAUTENBERG: What is the relationship of the current missions flown by federal air marshals to the problem of bombs being put aboard aircraft?

ANSWER: The Federal Air Marshals are assigned to provide armed in-flight security on selected U.S. air carrier routes. Their deployment is based on known or suspected terrorist hijacking activity targeted to that particular flight, an air route, or to either the departure or destination airport of that flight. The deployment determination is conditional upon domestic and international sources of intelligence in pertinent matters, much of which is classified.

It must be noted that the jurisdiction of the Federal Air Marshals is extremely limited. Although they do have extremely limited jurisdiction, Federal Air Marshals are tasked to observe the search of the aircraft by air carrier personnel to ensure it is thorough and when this search is not observed, the Federal Air Marshals conduct the search themselves. They also, when host government policies and procedures permit, observe the passenger check-in and screening procedures, thus helping to ensure the integrity of the flight.

Current international policies do not provide for the Federal Air Marshals to have access to checked baggage ramp areas.

HUMAN FACTORS STUDIES

SENATOR LAUTENBERG: What role did the FAA have in the development of the passenger and carry-on screening systems in use today?

ANSWER: The FAA had the primary role in developing and directing, through emergency regulatory action, implementation of 100 percent passenger and carry-on baggage screening by all U.S. air carriers on January 6, 1973. Throughout the ensuing years, the FAA, with the cooperation and assistance of the air carriers, has closely monitored the effectiveness of these screening operations. This intense and continuing oversight has resulted in several extensive modifications specifically designed to further enhance the quality of screening, develop state-of-the-art screening equipment, improve working conditions, and improve training and testing standards. Recent initiatives by the Air Transport Association will also result in increased quality and performance by screening personnel.

SENATOR LAUTENBERG: Did FAA conduct any studies of the human element involved in the screening process before it approved the current system?

ANSWER: As noted above, the current screening system was instituted by emergency regulatory action after several serious security incidents occurred in late 1972. This did not permit any prior evaluation of the human element involved. It soon became apparent, however, that the weakest element in the passenger screening system was not detection devices but was, in fact, the human element. Therefore, the FAA soon initiated a Human Factors Study (environment, selection, training, motivation, procedures, and testing) to develop standards for operation of the passenger screening checkpoints. This study described minimum qualification and experience standards for screening personnel. It prescribed initial, as well as on-the-job, training requirements and testing procedures.

The Director of Civil Aviation Security requested regional security division managers to look at and encourage implementation of the decisions and recommendations of the study. Each security checkpoint in the United States was individually evaluated to determine what steps could be taken to make the operation more effective and also to improve working conditions for screening personnel.

This was a very extensive and time-consuming effort which resulted in a greater appreciation of the screeners problems and how to resolve them.

INSPECTORS

SENATOR LAUTENBERG: Since FY 1989, FAA has requested that 300 new inspectors be hired each fiscal year as a means to boost its surveillance programs. Last year, the Committee was told that you increase your surveillance when you have financial concerns about an airline.

Have you ever established any correlation between financial stability or instability and maintenance expenditures?

ANSWER: The FAA recognizes that financial instability may have a negative impact on an air carrier's operation, and has established guidance to administer that condition. However, since evidence of financial instability may be exhibited in training, supply or parts levels, or other areas, as well as maintenance, a scientific correlation has not been established between financial instability or stability and maintenance expenditures. Instead, the FAA prefers to manage these types of circumstances on a case-by-case basis.

SENATOR LAUTENBERG: How did you determine your requested 300 position increase for fiscal year 1991?

ANSWER: The 300 position increase for fiscal year 1991 was based on the aviation safety inspector staffing standards. Those standards are based on job task analysis of inspector duties and on a mandatory, annual work program that is implemented nationally.

SENATOR LAUTENBERG: FAA has been criticized that its inspectors spend too much time doing paper audit work, rather than actual hands-on inspections. Is that valid?

ANSWER: It is important to note that paper work audits are an integral part of our surveillance activities. Our regulations require that certain records be maintained and proper surveillance of these areas require paperwork audits. Also, since our inspectors can not be present for each and every activity accomplished in the industry, the only way to conduct surveillance of these activities is with paperwork audits. However, in reviewing past work programs we felt that a better balance between paper work audits and actual "hands-on" inspections of the "hardware" was needed. To achieve this balance, we adjusted current work programs to include new work activities that focus on "hands-on" inspection of aircraft undergoing heavy maintenance and compliance with airworthiness directives. These activities increase the "hands-on" inspections of aircraft and focus in an area that is essential.

SENATOR LAUTENBERG: How much time do inspectors spend on paperwork exams, versus actual inspections?

ANSWER: We checked our records for FY 1989 accomplishments and our figures indicate that for every hour spent performing paper audits, our inspectors spend over 4 1/2 hours conducting other types of inspections we characterize as being predominantly hands-on.

SENATOR LAUTENBERG: The current backlog in the inspector training pipeline is about 270 inspectors, which FAA hopes to eliminate by the end of this fiscal year.

What action has FAA taken to prevent another such backlog? Is part of the problem a lack of instructors at the Academy? If so, does FAA plan to increase the number of instructors?

ANSWER: The Academy, which provides academic training, is sized to provide for the training of aviation safety inspectors steadily throughout the year. However, due to fiscal restraints caused mainly by the 100 percent absorption of the Federal pay raises by the FAA in each of the last two fiscal years, Flight Standards, like many other parts of the FAA, is required to fill its inspector positions during the last quarter of the fiscal year. This has created a backlog of new inspectors requiring training at the FAA Academy. Flight Standards and the Academy have actively worked toward reducing this backlog. In order to prevent another such backlog, FAA plans to return to an even-flow hiring pattern throughout the agency in FY 1991 subject to the availability of funds. The following actions were taken in FY 1990 to expedite the flow of new hire inspectors through the string training:

1. The size of the string training classes were increased from 16 to 20 students.
2. To supplement the instructor work force at the Academy, inspectors from district offices have been temporarily detailed to fill "associate instructor" positions at the Academy.

We have had difficulty in attracting instructors to teach at the FAA Academy. The Academy Instructor Review (AIR) dealt with instructor recruitment. One of the most significant AIR recommendations is to upgrade instructors to equal the highest field series and occupation. This was approved and implemented during the second quarter of FY 1990.

As an interim measure, the Flight Standards Service is considering providing full-time equivalent (FTE) positions to the FAA Academy to support inspector training.

SENATOR LAUTENBERG: How does a lack of sufficiently trained inspectors impact FAA's ability to accomplish surveillance and other inspection goals laid out in annual work plans? Are inspections as thorough now as in the past?

ANSWER: FAA district office annual work program goals, including numbers of inspections to be accomplished, are based on the on-board staffing levels at the beginning of the fiscal year. The surveillance and inspection activities are accomplished by qualified inspectors who have completed formal job function training and on-the-job training at the district office level. If a district office does not have sufficiently trained inspectors to accomplish surveillance, the annual work program guidance dictates the district office elevate their needs to the region, who in turn will search for inspectors who have the particular training needed. For example, a district office may not have a qualified operations inspector who is type rated in a particular make/model aircraft. A qualified inspector from another Flight Standards District Office or region may come to that office on temporary assignment to accomplish certification activities.

The annual work program guidance issued from headquarters emphasizes quality surveillance and inspection and the quality reporting of those activities. The new national Program Tracking and Reporting System (PTRS) greatly enhances our ability to analyze our surveillance activities. Verbal reports from some district office supervisors indicate their work is of a higher quality because of the emphasis placed on quality surveillance and quality reporting.

SENATOR LAUTENBERG: What measures is FAA taking to accommodate the training needs of projected FY 1990 hires?

ANSWER: A variety of measures have been taken to accommodate the training needs of projected FY 1990 new hires. Additional string courses were added to provide for the flow of FY 1990 new hire inspectors. Funds to support travel and per diem for these courses were authorized.

The current string program will be revised in FY 1991 to provide a "core" or "general" training segment. The new concept will enable the Academy to train a larger number of new hire inspectors. Following the initial core training, inspectors will return to their district offices and perform basic job functions. The Academy will provide additional specialized training to the inspectors following a predetermined period of field site work. Academy provided training is not the only training newly hired inspectors receive. Journeymen inspectors provide on the job training in aviation technical skills, governmental functions and regulatory processes.

As an interim measure, Flight Standards is considering providing full time equivalent (FTE) positions to the Academy to support inspector training.

SENATOR LAUTENBERG: Corrosion and metal fatigue, resulting in structural cracks, are critical and may lead to accidents. What new training programs is FAA providing to train inspectors in these areas?

ANSWER: During the last two years more than 650 inspectors and engineering personnel completed the Boeing Airplane Company Supplemental Inspection Document and Corrosion and the McDonnell Douglas Supplement Inspection Document seminars.

In addition, a series of Aging Aircraft Corrosion Control Seminars, divided into two phases are being developed as an interim to resident training. The FAA Technical Center has contracted with the Naval Air Development Center to develop and deliver this training. Aviation Safety Inspectors, airworthiness (maintenance), manufacturing and engineers will attend the training designed to improve their knowledge and skills on corrosion control involving assigned job tasks.

The seminar training will be delivered in two phases. Phase one, a 2 1/2-day seminar, will provide basic and generic training on chemistry applicable to aircraft corrosion, certificate management of an air carrier's corrosion program and interpretation of mandatory aircraft manufacturer's corrosion programs required by FAA Airworthiness Directives. Phase two, a 5-day seminar, will include corrosion theory, samples of and recommendation of the Aging Aircraft Evaluation Team and interpretation of FAA mandated (Airworthiness Directives) on manufacturer's corrosion control programs for certain make/model aircraft.

The resident training course, Certificate and Certificate Management of Air Carrier Aircraft Corrosion Control Programs, will incorporate curriculum and experience gained in the phase one and phase two seminars and become an ongoing resident course. The course length is estimated to be one to two weeks.

Approximately 195 inspectors will receive the Corrosion Control seminar training during FY 1990, 620 in FY 1991 and 456 in FY 1992. The course will become a resident course at the FAA Academy in FY 1992.

SENATOR LAUTENBERG: FAA has recently announced a self-audit program for the major carriers.

How will FAA's "self-audit" initiative impact the way inspectors currently do their work? Will the role of the inspector, and therefore the training required, need to be redefined?

ANSWER: Air carrier internal evaluation programs (ACIEP) will affect the way inspectors currently do their work. As air carriers self-report apparent violations to the FAA, inspectors transition from the traditional role of taking legal enforcement action to the role of providing assistance. Of course, inspectors must verify through investigation that the information provided by the air carrier is correct and complete. Indeed, the roles of inspection and enforcement are as important to aviation safety as they have been in the past.

Greater emphasis on this program of cooperation between the FAA and air carriers will require training for all parties concerned. We plan to accomplish this within the FAA through training seminars and handbook guidance. All Flight Standards inspectors will be trained. The draft guidance is already in the field for review and comment.

SENATOR LAUTENBERG: GAO recently reported that FAA could use its operations inspectors more efficiently and thereby reduce requirements for costly recurrent flight training. GAO recommended that FAA reevaluate the roles and responsibilities of operations inspectors. What action has FAA taken to implement this recommendation?

ANSWER: We agree with GAO's emphasis on the importance of flight training for operations inspectors who perform flight checks and are providing training to these inspectors on a priority basis. However, in agreeing with the GAO recommendation, we are not agreeing to a new functional analysis of the roles and responsibilities of operations inspectors nor to a review of inspector qualification standards and position descriptions. We have completed these tasks under the Safety Activity Functional Evaluation (SAFE) Project, which included a comprehensive review of inspector roles and responsibilities. There is no evidence that this review is inadequate or needs to be reaccomplished. Additionally, we disagree with the inference that operations inspectors who perform flight checks are the only inspectors needing flight training. We contend that all operations inspectors need flight training to maintain operational familiarity with the National Airspace System.

SENATOR LAUTENBERG: On page 97 of your budget justification, why are you requesting an additional 100 safety inspector positions when your estimated end-of-year employment is already more than 200 personnel below your authorized positions?

ANSWER: Early in FY 1990 support hiring was frozen to cope with the Gramm-Rudman-Hollings sequestration of funds. Despite a critical need for additional support personnel, hiring is still being deferred until funding priorities can be reviewed as part of our overall review of current financial data. We are reviewing our field and regional support functions to determine actual requirements, but the positions are clearly needed and will be filled as funds become available. Without the authorization, we would be unable to fill them regardless of funds available.

AIRPORT CAPACITY

SENATOR LAUTENBERG: A capacity requirements document of sorts would help us all understand more clearly which airports have the greatest needs and which projects at those airports should receive the highest priority.

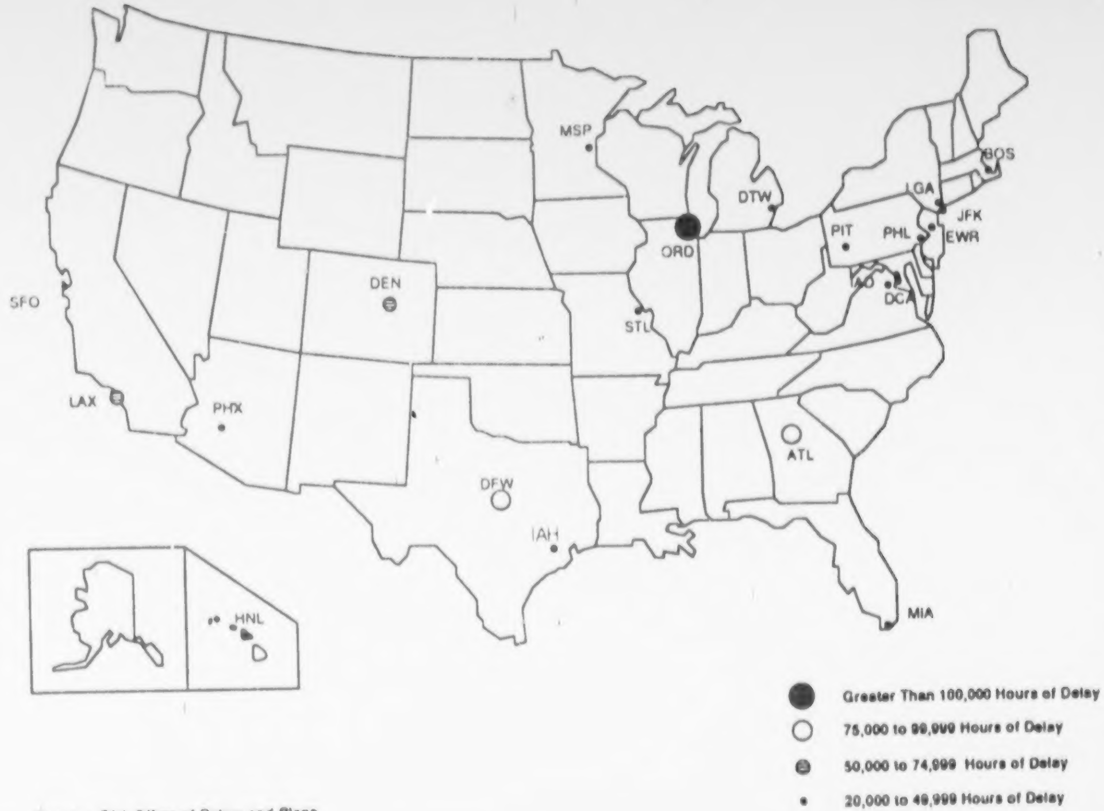
Is it possible for FAA to define the Nation's airport capacity needs in terms of location, quantity (acres, lengths of runway, additional airports), and the priority for such capacity projects?

ANSWER: The FAA has defined the Nation's airport capacity needs in detail in the 1989 Airport Capacity Enhancement Plan. The Plan shows the location of the 21 airports which each exceeded 20,000 hours of annual airline flight delays and the 39 airports forecast to exceed 20,000 hours of annual airline flight delay in 10 years if no improvements are made in airport or airspace capacity. (See Figs. 2-2 and 2-3 attached).

Although the acreage controlled by an airport does not directly determine capacity, runways do, and the FAA monitors the progress of construction of new and extended runways at the Nation's top 100 airports. (A copy of the latest report is attached).

In addition, since the Airport Capacity Enhancement Plan shows the forecast delay problem airports, as well as the airport development which is scheduled to occur and when the new capacity enhancing technology is expected to be in place, it is possible to determine which of the delay problem airports are likely to remain so in the next decade.

The priority for funding airport development projects is also set forth in the Plan in Tables 5-1 and 5-2 (copies attached).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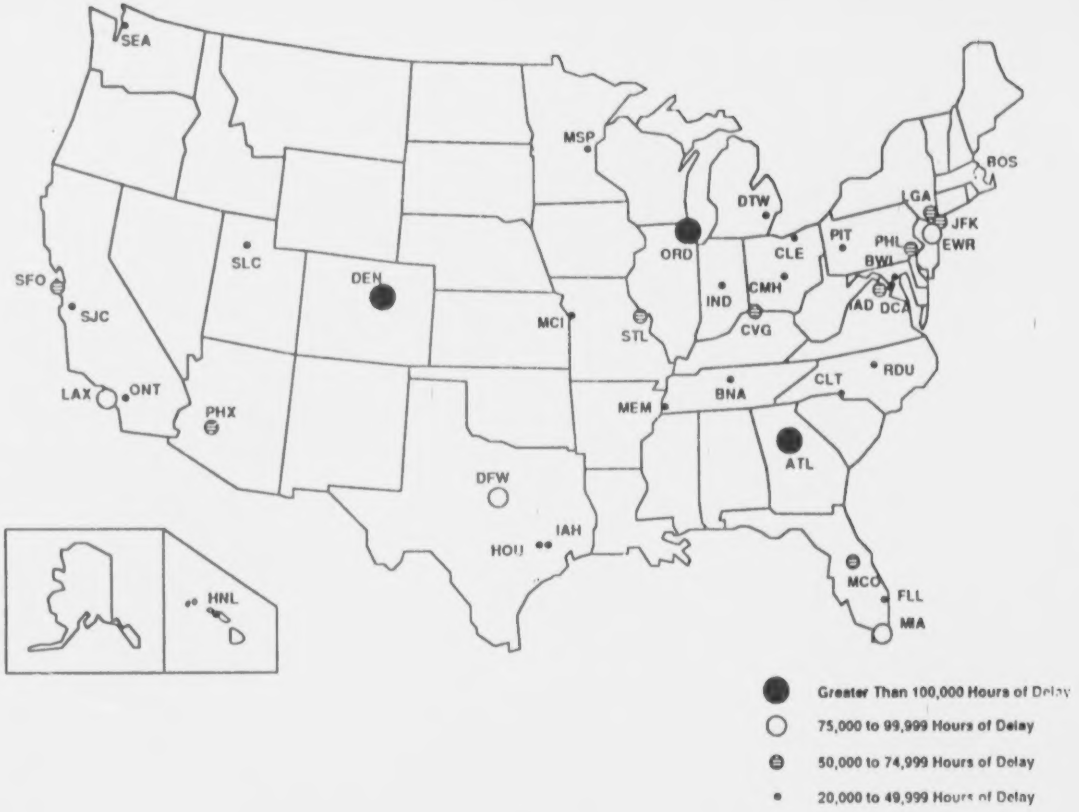
IAH
MIA
HNL
● Greater Than 100,000 Hours of Delay
○ 75,000 to 99,999 Hours of Delay
⊖ 50,000 to 74,999 Hours of Delay
• 20,000 to 49,999 Hours of Delay

Source: FAA Office of Policy and Plans

FIGURE 2-2. AIRPORTS EXCEEDING 20,000 HOURS OF ANNUAL AIRCRAFT DELAY IN 1987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STL
CVG
RDU
CLT
LAX
ONT
MEM
BNA
PHX
ATL
DFW
IAH
HOU
MCO
FLL
MIA
HNL
Greater Than 100,000 Hours of Delay
75,000 to 99,999 Hours of Delay
50,000 to 74,999 Hours of Delay
20,000 to 49,999 Hours of Delay

FIGURE 2-3. AIRPORTS EXCEEDING 20,000 HOURS OF ANNUAL AIRCRAFT DELAY IN 1997, ASSUMING NO CAPACITY IMPROVEMENTS

Last update: 9/29/89

NEW AND EXTENDED RUNWAYS PLANNED OR RECOMMENDED

(Bolded characters represent new and/or updated information)

AIRPORT	RUNWAY	IFR CAPACITY (ARR/HR) NEW CONFIG.	IFR CAPACITY (ARR/HR) CURRENT BEST	EST. COST ($M)	EST. DATE OPER.
Albuquerque (ABQ)	3/21 extension	26^2	26^2	$11	1991
Albany (ALB)	**10/28 extension**	26^2	26^2	**$2**	**1997**
Albany (ALB)	**1R/19L parallel**		26^2	**$15**	**2007**
Atlanta (ATL)	E/W parallel	63^6	52^1	$130	1994
Austin New Airport (AUS)	Parallels--17/35	52^1	26^2	$550*	1995
Baltimore (BWI)	10R/28L	36^4	26^2	$38	1994
Baltimore (BWI)	15L/33R extension	26^2	26^2	$10.5	1990
Birmingham (BHM)	18/36 extension	26^2	26^2	$21	1995
Buffalo (BUF)*	5L/23R	$26^{2,8}$	$26^{2,8}$		1999
Buffalo (BUF)	**14/32 extension**	$26^{2,8}$	$26^{2,8}$	**$4**	**1992**
Charlotte (CLT)	18L/36R extension	$52^{7,8}$	$26^{2,8}$	$6.8	1991
Charlotte (CLT)	18/36 parallel	$52^{1,8}$	$26^{2,8}$	$27.1	1998
Cincinnati (CVG)	18L/36R	52^1	26^2	$97	1991
Colorado Springs (COS)	17L/35R	52^1	26^2	$38	1992
Columbia (CAE)	5/23 extension	26^2	26^2	$14.5	1990
Columbus (CMH)	10L extension	36^4	36^4	$8.1	1992
Columbus (CMH)	28R extension	36^4	36^4	$2.4	1993
Dallas-Fort Worth (DFW)	17R/35L extension	52^1	52^1	$24	1991
Dallas-Fort Worth (DFW)	18L/36R extension	52^1	52^1	$24	1992
Dallas-Fort Worth (DFW)	16L/34R	78^3	52^1	$100	1993
Dallas-Fort Worth (DFW)	16R/34L	78^3	52^1	$95	2000
Dayton (DAY)	6L/24R extension	52^1	52^1	$8.4	1989
Denver New (DVX)	New Airport	104^{10}	52^1	$2,500*	1993
Detroit (DTW)	9R/27L	52^1	52^1	$69.1	1992
Detroit (DTW)	4/22 parallel	78^3	52^1	$58.2	1996
Detroit (DTW)	**3L/21R extension**	52^1	52^1	**$7.3**	**1990**
Fort Lauderdale (FLL)	9R/27L extension	36^4	26^2	$26	1995
Fort Lauderdale (FLL)	9L/27R extension	36^4	26^2	$8	1989
Fort Myers (RSW)	6/24 extension	26^2	26^2	$6.5	1992
Fort Myers (RSW)	6L/24R parallel	52^1	26^2	$47	1994
Grand Rapids (GRR)	8L/26R parallel	52^1	26^2	$25	1994
Grand Rapids (GRR)*	18/36 extension	26^2	26^2	$30	1995
Greensboro (GSO)	5/23 parallel	52^1	26^2	$20	2012
Greensboro (GSO)	**14/32 extension**	26^2	26^2	**$14**	**1998**
Greer (GSP)*	3/21 parallel	52^1	26^2	$25	1995
Harlingen (HRL)	**13L/31R**	26^2	26^2	**$5**	**1995**
Harlingen (HRL)	**13/31 extension**	26^2	26^2	**$6.7**	**1995**
Houston (IAH)	8L/26R	78^3	52^1	$44	1999
Houston (IAH)	9R/27L	52^1	52^1	$44	2002
Houston (IAH)	**14R/32L extension**	52^1	52^1	**$8**	**1997**
Indianapolis (IND)	4R/22L	36^4	26^2	$39	1990
Indianapolis (IND)	**4L/22R replacement**	26^2	26^2	**$42**	**1990**

AIRPORT	RUNWAY	IFR CAPACITY (ARR/HR) NEW CONFIG.	IFR CAPACITY (ARR/HR) CURRENT BEST	EST. COST ($M)	EST. DATE OPER.
Islip (ISP)	6/24 extension	26^2	26^2		
Kansas City (MCI)	1R/19L	52^1	26^2	$46.2	1992
Kansas City (MCI)*	9R/27L	52^1	26^2	$60	1999
Kansas City (MCI)*	18L/36R	52^1	26^2	$65	1999
Kansas City (MCI)*	18R/36L	52^1	26^2	$90	1999
Knoxville (TYS)	5R/23L extension	26^2	26^2	$17.4	1992
Las Vegas (LAS)	7R/25L	26^2	26^2	$42	1991
Little Rock (LIT)	4R/22L	52^1	26^2	$46	1991
Los Angeles (LAX)	6L/24R extension	52^1	52^1	$4	1991
Louisville (SDF)	East parallel	52^1	26^2	$250*	1992
Louisville (SDF)	West parallel	52^1	26^2		1995
Lubbock (LBB)	8/26 extension	26^2	26^2	$6.2	1995
Memphis (MEM)	18L/36R parallel	52^1	36^4	$80	1994
Miami (MIA)*	9/27 short parallel	52^1	52^1	$5	2010
Midland (MAF)	10/28 extension	26^2	26^2	$5.8	1991
Milwaukee (MKE)*	7L/25R	36^4	26^2		
Milwaukee (MKE)	1L/19R extension	26^2	26^2		
Minneapolis (MSP)	4/22 extension	36^4	36^4	$11	1990
Nashville (BNA)	2R/20L parallel	52^1	26^2	$78	1989
New Orleans (MSY)	1/19 parallel	52^1	26^2	$160	2000
New Orleans (MSY)	10/28 parallel	52^1	26^2	$40	1995
New Orleans (MSY)	10/28 extension	26^2	26^2	$10	1990
New York Kennedy (JFK)	4L/22R extension	36^4	36^4		
Newark (EWR)	11/29 extension	26^2	26^2		
Norfolk (ORF)	5R/23L	26^2	26^2	$7.5	1993
Norfolk (ORF)	14/32 extension	26^2	26^2	$2	1990
Oklahoma City (OKC)	17L/35R extension	52^1	52^1	$24	1996
Oklahoma City (OKC)	17R/35L extension	52^1	52^1	$20	1997
Oklahoma City (OKC)	17/35 parallel		52^1	$55	1999
Orlando (MCO)	17R/35L 3rd parallel	52^1	26^2	$55.5	1989
Orlando (MCO)	17L/35R 4th parallel	78^3	26^2	$80	1993
Philadelphia (PHL)	8/26 parallel-commuter	52^1	52^7		UNK
Phoenix (PHX)	8S/26S 3rd parallel	52^1	52^1	$88	1994
Pittsburgh (PIT)	14R/32L parallel	52^1	52^1		1995
Raleigh-Durham (RDU)	5/23 parallel	52^1	26^2	$27.4	1993
Rochester (ROC)	4R/22L parallel		26^2	$4.7	1996
Rochester (ROC)	4/22 extension	26^2	26^2	$0.5	1996
Rochester (ROC)	10/28 extension	26^2	26^2	$2.3	1994
Salt Lake City (SLC)	16/34 west parallel	63^6	36^4	$95	1995
San Jose (SJC)	11/29	26^2	26^2	$6	1989
San Jose (SJC)	30R/12L extension	26^2	26^2	$10	1990
Sarasota-Bradenton (SRQ)*	14L/32R parallel	26^2	26^2		
Savannah (SAV)	9L/27R parallel	52^1	26^2	$20	2010
Savannah (SAV)	18/36 extension	26^2	26^2	$3.5	1996
Seattle (SEA)	16/34 west parallel	26^2	26^2		

		IFR CAPACITY (ARR/HR)		EST.	EST.
AIRPORT	RUNWAY	NEW CONFIG.	CURRENT BEST	COST ($M)	DATE OPER.
Seattle (SEA)	13/31	26[2]	26[2]		
Spokane (GEG)	3L/21R	52[1]	26[2]	$11	1996
St. Louis (STL)*	13/31	26[2]	26[2]	$1	
Syracuse (SYR)	10L/28R	52[1]	26[2]	$5	1997
Tampa (TPA)	18R/36L 3rd parallel	52[1]	52[1]	$53	1997
Tucson (TUS)	11R/29L parallel	26[2]	26[2]	$38	1995
Tulsa (TUL)	17/35 parallel	78[3]	52[1]	$72.6	1996
Washington (IAD)	1W/19W parallel	78[3]	52[1]		1998
Washington (IAD)*	12/30 parallel	52[1]	52[1]		1994
Washington (IAD)	12/30 extension	52[1]	52[1]	$7.2	1992
West Palm Beach (PBI)*	9L/27R extension	26[2]	26[2]	$5	1994

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*Cost for New Airport (Phase I) land, terminal, runways, etc.

Airport names followed by an * were not updated by the region survey.

ENDNOTES

1. Independent parallel approaches [52 IFR arrivals per hour]
2. Single runway approaches [26 IFR arrivals per hour]
3. Triple approaches (currently not authorized) [78 IFR arrivals per hour]
4. Dependent parallel approaches [36 IFR arrivals per hour]
5. Triple approaches with parallel and converging pairs may permit more than 52 IFR arrivals if procedures developed
6. Triple approaches with dependent and independent pairs (currently not authorized) [63 IFR arrivals per hour]
7. Converging IFR approaches to minima higher than CAT I ILS [52 IFR operations per hour]
8. Added capacity during noise abatement operations.
9. Independent parallel approaches with one short runway.
10. If and when independent quadruple approaches are approved [104 IFR arrivals per hour].

TABLE 5-1. AIRPORT PROJECT PRIORITY WITH RELATIVE WEIGHTING

ITEM	ACTIVITY	WEIGHT
New Airport	Construct	20 points
	Acquire	20
Runway	New or Reconstruction	15
	Extension or Overlay	10
Taxiway	New or Reconstruction	10
	Extension or Overlay	8
Apron	New or Reconstruction	8
	Extension or Overlay	5
Other	Varies	1-10

TABLE 5-2. FISCAL YEAR 1988 GRANT FUNDING AT THE TOP 100 AIRPORTS

ACTIVITY	FUNDS	PERCENT
New Airport (AUSTIN)	$ 10,000,000	2 6
Runways	$ 87,776,194	23 2
Taxiways	$ 114,897,597	30 3
Aprons	$ 90,398,727	23 9
Instrument Approach Aids	$ 4,372,483	1 2
Terminal expansions	$ 32,697,503	8 6
Lighting and Signage	$ 12,310,104	3 3
Land Acquisitions	$ 26,075,446	6 9
	$378,528,054	100 0%

SENATOR LAUTENBERG: Last year, the FAA said there was the potential to establish almost 24 new "hubs". How are potential new hubs identified, and how is this addressed in your discretionary grant awards?

ANSWER: The potential new connecting hub airports were selected from the top 100 airports ranked by total aircraft operations. Each airport selected has the potential to permit multiple approach streams during instrument meteorological conditions. The potential new hubs are more than 50 miles from forecast delay-problem airports and each has sufficient potential runway capacity to accommodate significant increased airport operations.

The method for determining discretionary grant awards is included in the material supplied in response to the previous question.

SENATOR LAUTENBERG: How is "peak period pricing" going to help airport capacity? On what operations and where will this have the greatest impact?

ANSWER: A principal concern of the FAA is that peak period pricing not be used to limit the number of aircraft operations at an airport. Peak period pricing is viewed as a device for efficiently using existing capacity while simultaneously providing a means to fund additional capacity to meet growing demand. For this reason it is imperative to condition the implementation of peak period pricing not only on the existence of delay and congestion, but also on a genuine commitment by an airport ultimately to meet demand through capacity expansion.

If peak period pricing can eliminate just a few hourly traffic peaks on a given day, it can lead to significant elimination of delay. A simple reduction in either the number of daily traffic-hourly peaks, or a reduction in the number of flights during such peaks, can lead to an amelioration in overall delay.

SENATOR LAUTENBERG: To what extent do local noise restrictions affect airport capacity? (Where are such restrictions in place, that have the greatest impact?)

ANSWER: Noise abatement procedures adopted by the FAA and local airport authorities can produce a significant reduction in available capacity. This is particularly likely if there are restrictions on the use of departure and approach paths over residential areas, limitations on the number of airport operations at certain times of the day, and preferential use of particular runways or the periodic rotation through alternative runways. The impact of these restrictions is particularly severe when they are placed on those runway configurations with the highest capacity.

SENATOR LAUTENBERG: To what extent is underutilization of available runway space a problem?

ANSWER: Next to the construction of new runways, maximizing the utilization of existing runways is the most direct and significant action that can be taken to improve airport capacity. When visual procedures are in effect, runways are generally at or close to maximum utilization. On the other hand, instrument approach procedures are much more restrictive than the visual procedures in effect during better weather conditions and lead to underutilization of runway capacity.

SENATOR LAUTENBERG: What is FAA doing to use this underutilized space to alleviate congestion? (Cite specific airports and programs initiated.)

ANSWER: FAA is developing and testing new airspace procedures designed to bring approach procedures during IFR operations closer to those observed during VFR operations. The most promising of these are multiple approach procedures, aimed at allowing the simultaneous use of more than one arrival runway. FAA is on-site at Raleigh-Durham and Memphis airports demonstrating new radar technology designed to reduce separation between parallel runways to less than the current 4,300 feet required for simultaneous independent IFR operations. If successful, the procedure is expected to be in use by November 1991. FAA has approved triple parallel approaches for Dallas/Ft. Worth (DFW) and expects to approve quadruple approaches for that airport in July 1990. FAA is also conducting a program at DFW to develop national standards for triple and quadruple IFR approaches.

Salt Lake City is the site for two demonstration programs designed to increase capacity, improved dependent parallel approaches and improved in-trail spacing on wet runways. If successful, both of these procedures will be in use nationwide by May 1991.

FAA is also in the process of developing improved procedures for converging runways. A demonstration to prove the concept for dependent operations began in March of this year at St. Louis. A program plan for independent operations is in the development stage.

AIRPORT PROGRAM

SENATOR LAUTENBERG: The Committee provided increased fiscal year 1990 funding for airport capacity task force studies. Which airport have you studied during the past year, and what recommendations have been made?

ANSWER: FAA currently has airport capacity design teams working at 15 airports. We expect the studies at seven of these airports (Boston, Salt Lake City, Kansas City, Washington-Dulles, Seattle, Orlando, and Chicago) to be completed before the end of the fiscal year. Among the more than 200 recommendations being considered for inclusion in the final report for these seven airports are the following:

- Up to two new air carrier runways at Chicago-O'Hare
- A third runway at Orlando with a crossfield taxiway
- A new independent carrier runway at Salt Lake City
- Extension of an existing runway and new taxiways at Boston-Logan.
- A new north-south runway at Seattle

In addition, Kansas City is constructing a new north-south runway. The work of the design teams has demonstrated the need for this new runway by providing delay and cost/benefit information in support of the additional capacity.

SENATOR LAUTENBERG: You are requesting 530 positions and $38.92 million for administration of your airports program. On page 124 of your budget justification, you are requesting an increase of nine positions, four of which are for airport capacity. Last year, we directed that 26 of your 40 new positions should be assigned to work on airport capacity enhancements. Where do you stand with respect to filling these positions? How are they being used?

ANSWER: As of January 26, 1990, 14 of the positions have been filled and we are advertising the vacant positions and expect to hire the remaining 26 by the end of this fiscal year (FY-1990). A hiring plan was developed to phase in the remaining vacant positions.

We are moving as rapidly as possible to meet the recruitment and employment targets set out in our proposed hiring plan. The timeframes for filling these positions must also be consistent with the conservative spending guidelines established by the Administrator.

PROCUREMENT

SENATOR LAUTENBERG: What specific role will the Executive Director for Acquisition play in overseeing ATC modernization activities?

ANSWER: The Exeucitve Director for Acquisition will:

- Review requirements to ensure validity, completeness, clarity and affordability.
- Monitor management of programs to ensure that it is effective.
- Oversee program progress and provide the Administrator with an independent assessment of status, problems and risks. One objective will be to detect problem situations early so that corrective action can be taken.
- Direct an independent operational test and evaluation organization to ensure that new systems are not procured in production quantities until it has been demonstrated that they will meet operational requirements.

The Executive Director is in the process of establishing an FAA Acquisition Review Committee, which will approve major programs at key decision points, review proposed changes to program schedules or costs which exceed thresholds established by the Acquisition Executive, and be a top level oversight committee for control of ATC modernization activities. The Executive Director for Acquisition will be the chairman of this committee and a member of the staff will act as executive secretary.

SENATOR LAUTENBERG: Other than overseeing the independent test and evaluation function, how will the new Executive Director influence projects already underway?

ANSWER: Ongoing major projects are monitored by the Office of Acquisition Policy and Oversight. That office closely monitors the progress of these projects and convenes periodic program reviews for the Administrator and other senior FAA executives, as well as OST. The Executive Director for Acquisition is insisting that the program managers, when they present these briefings, cover detailed cost and schedule performance data and explain variances. The reviews are designed to bring out problems and issues so that action and responsibility can be assigned for their resolution.

Additional functions and objectives of the office are to:

- o approve/disapprove changes to baselines
- o control requirements creep
- o ensure program managers have the freedom and the tools to make required trade-offs among cost, schedule and performance in order to achieve capable, timely, affordable systems.

SENATOR LAUTENBERG: Procurement problems have been identified as contributing to the delay in efficiently modernizing the air traffic control system. This problem has been recognized and acknowledged by the Secretary of Transportation. What specific changes have you made to improve the procurement techniques used by FAA? Are you proposing any changes that will require the support and action of this Committee?

ANSWER: Specific improvement techniques will take time to develop. We have, however, under the Executive Director for Acquisition, launched a project to do exactly that. The Executive Director for Acquisition has a Special Assistant for Acquisition Improvement who is assembling a small team to make a detailed analysis of the present process, design a computer model, and use it as a tool for improving and streamlining the procurement process. In addition, the Office of Acquisition Policy and Oversight has reviewed studies completed for DOD by various organizations including the Defense Science Board, The President's Blue Ribbon Commission on Defense Management, GAO and others, for the purpose of applying their recommendations, where applicable, to the FAA.

The recent realignment in the FAA has been a result, in part, of a study of ways to improve the acquisition process. A major change was the consolidation of program management under one associate administrator. The level of program management has been raised, and the caliber of program managers is being improved through training programs and selection of highly experienced individuals. This stronger focus on program management, coupled with a higher level of acquisition oversight, will improve the total procurement process.

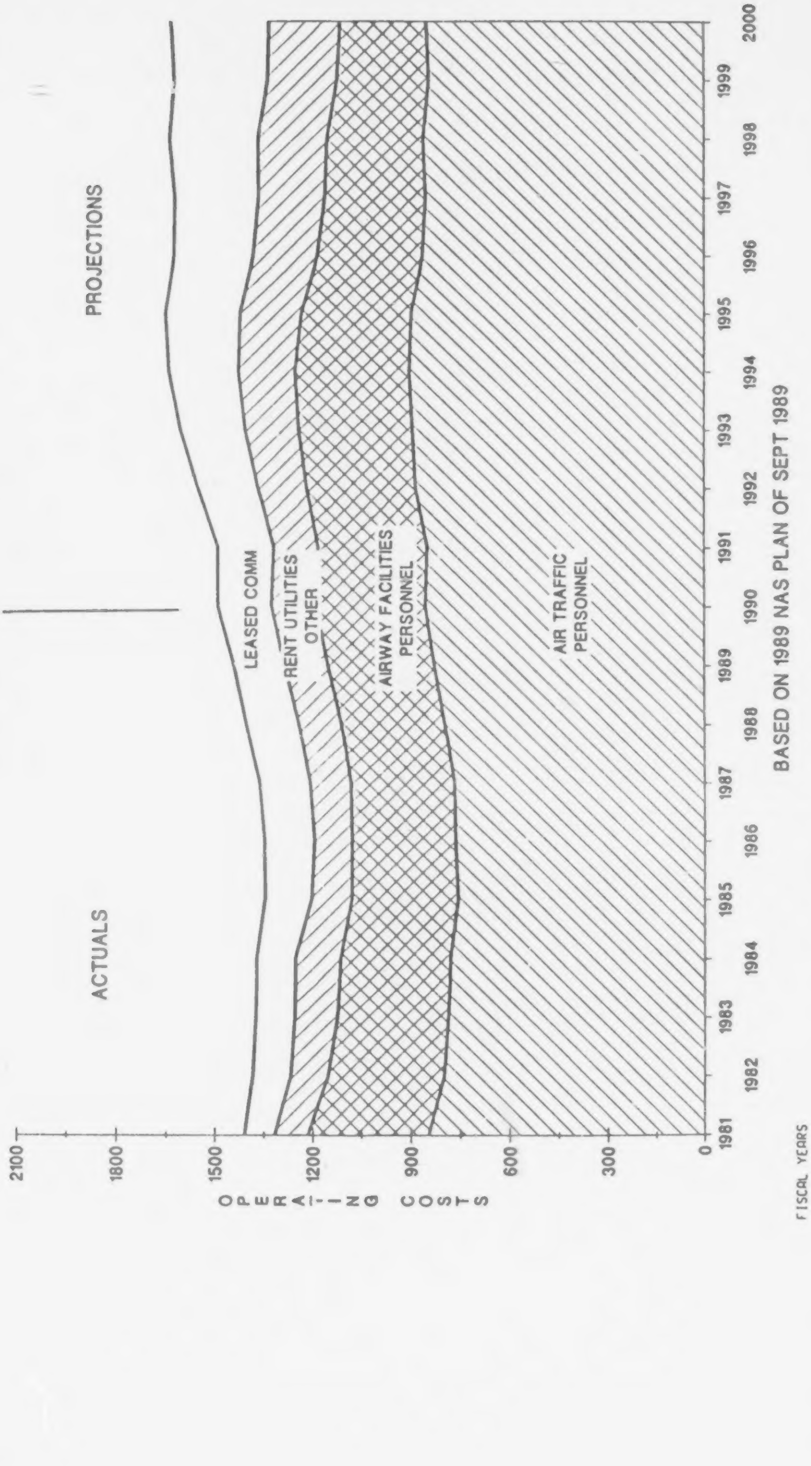
As of now we have no changes in mind that would require the support of your committee, but we will not hesitate to come to you with specific requests should we feel that to be necessary.

OPERATING COSTS

SENATOR LAUTENBERG: Please provide for the record a chart that adds actual airway facilities and air traffic operating costs for fiscal years 1981 through 1990 and your current estimates for fiscal years 1991 through 2000.

ANSWER: The information follows.

NAS PLAN AIRWAY FACILITIES/AIR TRAFFIC OPERATING COSTS
CONSTANT 1981 DOLLARS (MILLIONS)



BASED ON 1989 NAS PLAN OF SEPT 1989

DRUG/ALCOHOL TESTING

SENATOR LAUTENBERG: What is the total amount FAA spends on alcohol and drug testing and enforcing requirements in this area? Please detail the costs for fiscal years 1989, 1990, and 1991.

ANSWER: Actual costs for the Aviation Industry Drug Program in FY 1989 were $930,000. In fiscal years 1990 and 1991 $5,452,000 is budgeted for this program.

Currently, the Department of Transportation is reviewing comments from an Advanced Notice of Proposed Rulemaking concerning an Alcohol Abuse Prevention Program for the Transportation Industry. Alcohol is not yet part of the industry drug testing program.

REEMPLOYED ANNUITANTS

SENATOR LAUTENBERG: What is the status of the reemployed annuitants program?

ANSWER: Offices are free to reemploy annuitants. However, there is no formal program or special funding to recruit and employ them. This fiscal year, air traffic reemployed annuitants were to be subject to the salary offsets that affect other reemployed annuitants. Previously, there was special funding to eliminate those offsets for some of the reemployed annuitants in air traffic.

SENATOR LAUTENBERG: List the number involved in this program for the past three years and the costs of the program.

ANSWER: The information follows:

	Total in Air Traffic Organization	Total in 2152 Series In AT Org.	Total AT X GS-13/5
Oct. 2, 1988	132	129	$5,909,508
Oct. 2, 1989	143	137	$6,664,515
May 2, 1990	125	118	$6,035,125

FEDERAL EMPLOYEES RETIREMENT SYSTEM

SENATOR LAUTENBERG: Last year, you indicated that your fiscal year 1990 federal employees retirement system (FERS) costs would be about $100 million. Do you still believe this is a valid estimate?

ANSWER: No. Based on our latest financial plan, we expect the FY 1990 cost to be approximately $116 million.

SENATOR LAUTENBERG: How much does your fiscal year 1991 budget include for FERS, what assumptions is this amount based on, and what does your experience to date indicate regarding the validity of those assumptions?

ANSWER: Our FY 1991 request includes $134 million for FERS. This estimate is based on costs associated with our current workforce as well as anticipated increases in the workforce. Our previous years estimate was too low. We believe this request is more valid since we now have historical data to work from.

SENATOR LAUTENBERG: You are requesting $250 million for "other personnel compensation". What is included under this request?

ANSWER: It includes:

Pay demonstration	$22,237,000
Overtime	32,538,000
Holiday	32,761,000
Premium pay for on-the-job training, loss of meal, training in excess of 40 hours, 5 percent air traffic revitalization act, operational responsibility differential and currency	74,972,000
Sunday, night differential, and hazardous duty pay, post differential, fixed premium compensation, and federal physicians comparability allowance	62,521,000
Awards - special achievement, merit pay, senior executive service and performance	25,273,000
	$250,302,000

FLIGHT SERVICE STATIONS

SENATOR LAUTENBERG: Please provide a listing of the 34 flight service stations scheduled for consolidation, including the date each of these stations will be consolidated.

ANSWER: The number of consolidations scheduled in Fiscal year 1991 is 39. The locations, the receiving AFSS, and the planned date of closure are as follows:

FSS	AFSS	FY QTR
Bettles, AK	Fairbanks, AK	4th
Northway, AK	Fairbanks, AK	2nd
Tanana, AK	Fairbanks, AK	4th
Big Delta, AK	Fairbanks, AK	3rd
Yakutat, AK	Juneau, AK	2nd
Homer, AK	Kenai, AK	3rd
McGrath, AK	Kenai, AK	2nd
Farewell, AK	Kenai, AK	2nd
Tuscaloosa, AL	Anniston, AL	4th
Harrison, AR	Jonesboro, AR	4th
Little Rock, AR,	Jonesboro, AR	3rd
Pine Bluff, AR	Jonesboro, AR	3rd
Crescent City, CA	Oakland, CA	4th
Lancaster, CA	Riverside, CA	2nd
Atlanta, GA	Macon, GA	3rd
Bowling Green, KY	Louisville, KY	2nd

Paducah, KY	Louisville, KY	3rd
Billings, MT	Great Falls, MT	1st
Bozeman, MT	Great Falls, MT	2nd
Butte, MT	Great Falls, MT	3rd
Cut Bank, MT	Great Falls, MT	2nd
Lewistown, MT	Great Falls, MT	3rd
Livingston, MT	Great Falls, MT	2nd
Miles City, MT	Great Falls, MT	3rd
Missoula, MT	Great Falls, MT	1st
Poughkeepsie, NY	Islip, NY	1st
Bradford, PA	Altoona, PA	3rd
DuBois, PA	Altoona, PA	4th
Bristol, TN	Nashville, TN	4th
Crossville, TN	Nashville, TN	4th
Alice, TX	San Angelo, TX	4th
San Antonio, TX	San Angelo, TX	4th
Wink, TX	San Angelo, TX	4th
Newport News, VA	Leesburg, VA	2nd
Laramie, WY	Casper, WY	2nd
Rawlins, WY	Casper, WY	2nd
Rock Springs, WY	Casper, WY	3rd
Sheridan, WY	Casper, WY	4th
Worland, WY	Casper, WY	3rd

SENATOR LAUTENBERG: What is the status of your flight service station consolidation program -- how many automated facilities have been opened, how many stations have been closed, what costs have been incurred, and what cost savings have resulted?

ANSWER: The status of the FSS System as of April 1, 1990, was as follows:

- 46 AFSS's operational, 39 equipped with Model 1, seven equipped with the Leased Service A and B System.
- 175 FSS's relocated/consolidated
- 143 FSS's yet to be relocated/consolidated

Sixty-two percent of our workforce has been reassigned to the AFSS's. The Direct User Access Terminal System (DUATS) was implemented nationally on February 14, 1990. We began to install Model 1 Full Capacity equipment in March and will commission the first system later this fiscal year. Our current schedule calls for the last AFSS and the last Model 1 Full Capacity commissioning in FY 1993. The final FSS consolidation will be completed in FY 1994.

The cost avoidance/savings of individual consolidations vary with each site. The average cost to operate an FSS is $150,000 per year, excluding salaries. The FAA will typically break even after first year expenditures and realize a cost benefit in the second and subsequent years. The amount of cost savings/avoidance depends on whether or not contract weather observations are required. The life-cycle cost benefits associated with this program were, however, based on a totally modernized system in place, which is not expected to occur prior to 1994. The benefits were to be derived primarily from a lower unit cost-per-service that would be accomplished via productivity increases, pilot direct access, and the ultimate reduction in staff.

SENATOR LAUTENBERG: On page 36 of your budget justification, why do you need 158 additional planning positions? Please elaborate on your answer for the record, including a breakdown by activity (towers, center, etc.) of where these positions will be assigned.

ANSWER: The Air Traffic operational workforce has increased by over 3,200 since 1986. In addition, system requirements have expanded dramatically. This has required a greater effort on the part of the FAA to plan and direct the Air Traffic workforce.

For the past 5 to 7 years, almost all the Air Traffic increases have been focused on operational staff. Our Centers and Terminals can not continue to perform necessary support functions with operational personnel without affecting operational capability.

The additional planning positions requested for FY 1991 will provide for NAS Plan implementation specialists, system evaluators, training managers, administrative officers, education specialists, traffic management coordinators, automation specialists, etc.

The precise assignment of these positions has not been determined at this time.

SENATOR LAUTENBERG: Please provide a listing of the 15 VFR towers and 39 flight service stations proposed for decommissioning in fiscal year 1991.

ANSWER: The 15 VFR towers proposed for decommissioning in FY 1991 will not actually be decommissioned but will be transitioned from FAA-staffed towers to FAA contract towers. Specific placenames have not yet been identified for the additional control towers planned for inclusion in the Contract Tower Program. However, the sites we are reviewing include operating FAA control towers, particularly those which do not meet criteria for continued operation as an FAA-staffed facility but would be cost effective to operate as a contract tower. Additionally, we will be reviewing the temporarily closed control towers to see if they meet criteria for inclusion in the program along with a few non-Federal towers which have been submitted for consideration for inclusion in the program.

The 39 flight service stations proposed for decommissioning are:

FSS	AFSS	FY QTR
Bettles, AK	Fairbanks, AK	4th
Northway, AK	Fairbanks, AK	2nd
Tanana, AK	Fairbanks, AK	4th
Big Delta, AK	Fairbanks, AK	3rd
Yakutat, AK	Juneau, AK	2nd
Homer, AK	Kenai, AK	3rd
McGrath, AK	Kenai, AK	2nd
Farewell, AK	Kenai, AK	2nd
Tuscaloosa, AL	Anniston, AL	4th
Harrison, AR	Jonesboro, AR	4th
Little Rock, AR,	Jonesboro, AR	3rd
Pine Bluff, AR	Jonesboro, AR	3rd
Crescent City, CA	Oakland, CA	4th
Lancaster, CA	Riverside, CA	2nd

Atlanta, GA	Macon, GA	3rd
Bowling Green, KY	Louisville, KY	2nd
Paducah, KY	Louisville, KY	3rd
Billings, MT	Great Falls, MT	1st
Bozeman, MT	Great Falls, MT	2nd
Butte, MT	Great Falls, MT	3rd
Cut Bank, MT	Great Falls, MT	2nd
Lewistown, MT	Great Falls, MT	3rd
Livingston, MT	Great Falls, MT	2nd
Miles City, MT	Great Falls, MT	3rd
Missoula, MT	Great Falls, MT	1st
Poughkeepsie, NY	Islip, NY	1st
Bradford, PA	Altoona, PA	3rd
DuBois, PA	Altoona, PA	4th
Bristol, TN	Nashville, TN	4th
Crossville, TN	Nashville, TN	4th
Alice, TX	San Angelo, TX	4th
San Antonio, TX	San Angelo, TX	4th
Wink, TX	San Angelo, TX	4th
Newport News, VA	Leesburg, VA	2nd
Laramie, WY	Casper, WY	2nd
Rawlins, WY	Casper, WY	2nd
Rock Springs, WY	Casper, WY	3rd
Sheridan, WY	Casper, WY	4th
Worland, WY	Casper, WY	3rd

CONTRACT TOWERS

SENATOR LAUTENBERG: For the record, provide a list of your contract towers and their locations.

ANSWER: The FAA plans to have 26 contract towers in operation by the end of FY 1990. The towers are:

Cape Girardeau, MO
Topeka (Billard), KS
Stewart, NY
Lewisburg, WV
Marion, IL
Waukegan, IL
Cleveland, (Cuyahoga Co.), OH
Martha's Vineyard, MA
Nashua, NH
Hailey, ID
Pendleton, OR
Bellingham, WA
Lakeland, FL
Valdosta, GA
Owensboro, KY
Paducah, KY
N. Myrtle Beach, SC
Smyrna, TN
New Iberia, LA
Farmington, NM
Hobbs, NM
Ardmore, OK
Enid, OK
Laredo, TX
Flagstaff, AZ
Whiteman, CA

SENATOR LAUTENBERG: Do you pay all the costs of a contract tower operation?

ANSWER: The FAA pays all the costs for air traffic control services at its contract towers.

SENATOR LAUTENBERG: How much does your fiscal year 1991 budget include for contract towers?

ANSWER: The budget includes $6.6 million in the base for contract towers, and no program increase is requested in FY 1991.

The current base for the program will fund continuation of the 26 contract towers expected to be in operation by the end of FY 1990. Program expansion is planned to include about 10 more locations in FY 1991 but will be dependent on overall agency priorities.

SYSTEMS MAINTENANCE

SENATOR LAUTENBERG: You are estimating that your field maintenance employment will be 8,800 personnel as of September 30, 1990. What is your present employment?

ANSWER: As of March 31, 1990, Field Maintenance employment was 8,636, a reduction of 10 from the start of year level. We still expect to reach 8,800 by the end of FY 1990.

SENATOR LAUTENBERG: Last year, you indicated that you planned to commission 500 new facilities in fiscal year 1990. How much progress have you made to date and do you expect to meet your projected level?

ANSWER: As of March 31, 1990, we have commissioned approximately 361 facilities. Except for Microwave Landing Systems (20 estimated, none currently planned), we expect to substantially meet our projections.

SENATOR LAUTENBERG: Among the facilities you planned to commission, there were 11 automated flight service stations, 20 microwave landing systems, and 105 automated weather observing systems. Would you indicate how many of these have actually been commissioned to date?

ANSWER: Yes. To date, we have commissioned 14 automated weather observing systems.

SENATOR LAUTENBERG: Would you provide a listing of the new facilities planned for commissioning during fiscal year 1991?

Answer: Since the Congressional submission, facility planning data have been updated. The following is a revised listing of new facilities planned for commissioning during fiscal year 1991:

Air route surveillance radar	2
Airport surface detection equipment	7
Airport surveillance radar	4
Automated radar terminal system	4
Air traffic control radar beacon	5
Radio communications link repeater	180
Radio communications link terminal	31
Terminal doppler weather radar	1
Automated flight service station	6
Automated weather observing system	54
Direction finder	49
Next generation weather radar	4
Remote cntr. air/ground comm. facility	15
Remote communications outlet	14
Approach light system	29
Distance measuring equipment	10
Instrument landing system	14
Microwave landing system	8
Omnidirectional airport lighting system	4
Runway end identification light	24

Runway visual range	55
Tactical air navigation equipment	4
Visual approach slope indicator	6
VHF omnidirectional range	12
Total	542

SENATOR LAUTENBERG: Please also provide for the record the amount your fiscal year 1991 budget includes for contractor maintenance and how this compares with the levels for each of the past four fiscal years.

ANSWER: The following represents contract maintenance for FY 1987 through FY 1991:

	AMOUNT ($ 000)
FY 1987	$ 1,800.0
FY 1988	11,206.0
FY 1989	11,130.0
FY 1990	19,330.0
FY 1991	19,330.0

Over the last five years, we had a substantial increase in contract maintenance largely due to new programs such as the Host computer; Computer Aided Engineering Graphics system; Flight Service Automation System; and increases in the Integrated Communications Switching System. It is anticipated that this program will more than double in FY 1992 over the current FY 1991 base.

CONTRACTOR SUPPORT

SENATOR LAUTENBERG: What is the total amount of funds your fiscal year 1991 budget includes for CORN contractor support and OATS contractor support.

ANSWER: The Facilities and Equipment (F&E) FY 1991 budget request includes $25.0 million for the prime CORN contractor support. OATS contractor support is expected to be less than $1 million, and highly dispersed among operating elements throughout the agency.

SENATOR LAUTENBERG: Have you actually purchased any equipment under the OATS program?

ANSWER: Yes, so far this year we have purchased over 200 OATS workstations.

ACADEMY TRAINING

SENATOR LAUTENBERG: The Committee is interested in the cost and level of quality of the instruction provided to train air traffic controllers at the FAA Academy.

We understand that recent graduates frequently complain that the Academy instructional materials are out of date because of the slow pace of updating the materials to conform to technological and procedural changes. Under the existing contract, or via the follow-on contract, what is FAA doing to address this problem?

ANSWER: We receive relatively few student comments about outdated instructional material.

For example, a review of the student critiques from the May 1990 graduating screen class reveals that 114 students (77 percent) had no comments pertaining to Academy instructional material being out of date. Positive comments on the instructional material were made by 16 students (11 percent). Negative comments were made by 11 students (7 percent), of which 5 students (3 percent) specifically referred to outdated slides being used. There were eight students (5 percent) who commented that some of the slides were difficult to read.

The Academy conducts many courses for air traffic controllers. Most are completely up-to-date in regard to the technology and procedures used in the field. For example, the course in which flight service station (FSS) specialists are trained utilizes the Model 1 computer used in the most advanced of the automated FSS's in the field. However, the majority of ATC students attend the air traffic controller screen course (Screen), which uses nonradar control procedures to determine potential to succeed in the occupation. Nonradar procedures are very basic, do not require frequent updating, do not need the expensive radar simulators, and are more cost efficient in screening. In courses that are not used for screening, such as training following the Screen, changes are needed more regularly. For instance, in June the Academy will begin installation of tower cab simulators with computer generated graphic displays using advanced training technology. Changes in training can be accomplished quickly by altering the computer program.

SENATOR LAUTENBERG: Without sacrificing quality instruction, are there ways to improve the efficiency and trim the high costs of training controllers? For example, the Committee understands that Academy instructors are compensated on a full-time basis, but as much as 20 percent of their time is "downtime" which is unrelated to Academy work. Has FAA explored possible cost savings or improved efficiencies in the compensation or utilization of the work force?

ANSWER: The Screen course has proven to be the most efficient air traffic controller course to date in using instructor resources. The majority of contract instructors are employed for the Screen course. When the instructors are not conducting the Screen they are accomplishing proficiency training and preparing for the next class. The contractor must employ additional instructors to cover absences (sick leave, vacation leave, etc.). Currently, the contractor is permitted to hire up to 20% additional instructors for the coverage. These additional instructors conduct courses that are taught only part of the month. The contractors usually schedule leave when there is "downtime" in the Screen or other courses. In the solicitation of the Instructional Services contract, we are looking for innovative staffing proposals aimed at cost savings and improved efficiencies. In addition, the new contract has a specific task established to provide productive work for any instructor not being utilized for instructional duties.

SENATOR LAUTENBERG: In connection with the pending recompetition of the Academy contract, what steps has FAA taken to encourage broad interest among qualified competitors, to assure that the competition will yield creative and cost-effective ideas to improve controller training, and to make the best use of air traffic control expertise?

ANSWER: FAA has found that the Federal Acquisition Regulation procedures yield the necessary number, variety, and quality of respondents for solicitations such as the Air Traffic Instructional Services Contract. It was not deemed necessary to do any special advertisement for this contract.

The Instructional Services Contract is for the purpose of providing instructors and courseware developers to carry out FAA determined training programs. Contract instructors will continue to be individuals with extensive air traffic control experience.

In the area of courseware development and revision, the solicitation requires the use of instructional systems design specialists with college degrees. These specialists will be teamed with the subject matter experts--controllers--to assure that training uses the best and most up-to-date learning and instructional approaches. This requirement, in conjunction with FAA's initiatives in en route and terminal curriculum redesign and expansion of computer-based training, will increase the effectiveness of air traffic controller training.

HUMAN RESOURCES

SENATOR LAUTENBERG: Describe the academic and industrial ties program. How are these funds spent (please detail)?

ANSWER: The FAA is forging new partnerships with academia and industry to stay on the leading edge of instructional design and advanced technologies for training delivery, and to use the resources of academic institutions to test new training and recruitment concepts.

The FAA is committed to elevating its training to a state-of-the-art level. To keep current with the latest training technology, FAA will participate in a series of symposia with the international aviation community, training vendors, and colleges and universities. Annual symposia will be conducted to address issues of broad interest to the aviation training community, such as innovations in simulation technology, maintenance issues, and human factors engineering. Published proceedings of the symposia will be distributed.

The FAA is also pursuing several innovative pre-hire air traffic control program initiatives with academia. These initiatives are part of the FAA's Flight Plan for Training and are intended to test the concept of having initial technical training of candidates for air traffic controller positions occur at the post-secondary academic level. By providing training and screening at a preemployment phase, the costs to FAA for screening and training newly-hired developmentals would be significantly reduced.

During FY 1990, $150,000 is being spent on the FAA's annual symposium and $3.6 million is being spent on academic pre-hire programs.

AIRCRAFT PURCHASE LOAN GUARANTEE PROGRAM

SENATOR LAUTENBERG: How many defaults have you had to date under this program, and what is the total amount you have paid as a result of these defaults?

ANSWER: As of May 17, 1990, 11 airlines had defaulted on 22 guaranteed loans, and the FAA had paid $181.5 million in principal, interest and administrative expenses for these defaults.

SENATOR LAUTENBERG: How much has the government recovered in these situations, i.e., defaulted loans?
ANSWER: As of May 17, 1990, the Government had recovered $131.3 million (72 percent of default settlement costs).

SENATOR LAUTENBERG: What is your responsibility with respect to disposing of the aircraft when a loan is defaulted?
ANSWER: The FAA's primary responsibility with respect to the collateral is to dispose of it in a manner which maximizes recovery of costs the FAA incurs in the settlement of the loans. The FAA has the option of selling the collateral or transferring the aircraft to a Government agency for its use. The collateral may be sold by the Federal Government, the loan trustee as agent for the Federal Government, or by an aircraft broker as agent for the Federal Government. When collateral is sold by the Federal Government or by the trustee as agent for the Federal Government, the following procedures are used to assure that the sale is accomplished in a commercially reasonable manner:

1) Advertise the sale in general business and trade publications.
2) Give legal notice of the sale to the defaulting carrier.
3) Have an independent appraisal made of the collateral.
4) Accept bids for a reasonable period of time.
5) Negotiate with bidders to maximize the price received.

If the collateral is kept for Government use, we must give legal notice to the defaulting airline and other creditors and follow procedures of the General Services Administration for interagency transfer of surplus property.

SENATOR LAUTENBERG: You currently have borrowing authority for fiscal year 1990 of about $10 million. How much of this authority have you used to date?
ANSWER: As of May 17, 1990, $56,966 of the borrowing authority had been used.

SENATOR LAUTENBERG: Why do you feel you need an additional $57 million of borrowing authority in fiscal year 1991, particularly since your estimated contingent liability at the end of 1990 is only about $47 million?
ANSWER: At the time the FY 1991 budget was prepared, $57 million was the FAA's estimate of the amount needed to cover a worst case combination of defaults. In the intervening period, loan repayments ahead of schedule, merger of an airline which had been in fair financial condition into a stronger carrier, and greatly improved performance of another carrier with a guaranteed loan significantly reduced our risk. The current estimate of the FAA's contingent liability for loan principal only at the end of FY 1990 is $43.42 million, and the corresponding estimate for the end of FY 1991 is $33.03 million.

SENATOR LAUTENBERG: Provide for the record a listing of outstanding guarantees showing the company, amount, type of aircraft, creditor, and interest rate.

ANSWER: The data you requested are in the table that follows.

GUARANTEED LOAN PROGRAM: STATUS AS OF 4/30/90

AIRLINE	LOAN NO.	DATE OF LOAN	GUARANTEED LOAN BALANCE	CLASS A CREDITOR/TRUSTEE	INTEREST RATE	AIRCRAFT COLLATERAL	#
Midway Airlines	88	9-30-81	$3,256,200	CONTINENTAL ILLINOIS BANK & TRUST CO.	Variable	Cash in Escrow Fund	
USAIR							
Piedmont Airlines	95	9-29-80	$10,598,100	STATE OF WASHINGTON	11.125%	B-737-200	3
PSA	78	9-30-80	$23,203,500	U.S. TRUST CO. NY	11.75%	DC-9-80	4
PSA	121	9-04-81	$8,699,800	BANKERS TRUST	15.90%	DC-9-80	2
Total			$45,757,600				

AIRCRAFT NOISE

SENATOR LAUTENBERG: It is my understanding that the FAA has the capacity, through computer modeling, to project the on-ground noise impacts due to overflying aircraft. Does the FAA do computer modeling prior to implementing significant changes in air routes, or before implementing new routes?

ANSWER: As other Federal agencies, the FAA is subject to the environmental requirements resulting from the National Environmental Policy Act. Consequently, air traffic actions are required to follow the procedures outlined in the FAA order on environmental reviews.

SENATOR LAUTENBERG: If yes, for what routes are such projections made (what criteria are used in determining what changes would be subjected to such modeling?); how accurate is modeling?; what is done with information gathered in this process?

ANSWER: When an environmental assessment is required of an air traffic action, the order explicitly directs the FAA to perform noise analysis. Because of the public reaction to the Expanded East Coast Plan and because noise can restrict capacity, we are presently examining procedures that would provide even more information on noise to the air traffic decision-maker.

The modeling of aircraft noise in the vicinity of airports has evolved to the point of accurately depicting airport noise exposure for the evaluation of proposed Federal actions and for the assessment of airport mitigation. Under the auspices of the Society of Automotive Engineers, an international committee of experts from industry and government has established computational procedures that predict airport noise exposure values which are statistically reliable and precise when matched with measurements from permanent airport noise monitoring systems.

SENATOR LAUTENBERG: Has the FAA ever not implemented a change based on the finding of computer modeling of noise impacts?

ANSWER: No. However, as stated above, because of public reaction to the Expanded East Cost Plan, we are presently examining procedures that would provide additional information.

SENATE LAUTENBERG: What major changes, similar in size and scope to the Expanded East Coast Plan, are being planned or implemented?

ANSWER: None.

SENATOR LAUTENBERG: Has noise impact modeling been conducted for these changes?

ANSWER: As stated above, no major changes, similar in size and scope to the Expanded East Coast Plan are currently being planned. However, all air traffic actions are required to follow the procedures outlined in the FAA order on environmental reviews.

FACILITIES AND EQUIPMENT

SENATOR LAUTENBERG: What programs would be delayed if the facilities and equipment account received $2 billion (still a 17 percent increase over 1990), but not the 45 percent increase you request?

ANSWER: The FAA's FY 1991 budget request is the product of a series of rigorous and exhaustive reviews in which many programs compete within the agency for limited resources, and against other programs at the DOT and OMB levels of review. The result is a well-balanced combination of requirements designed to achieve the Administration's goals of modernization of the airspace system, as well as the maintenance of the current infrastructure. There are four categories by which the agency's request could be described. The first of those, as mentioned in earlier testimony, is "ongoing contracts;" the others are "infrastructure," "airport capacity enhancement," and "new starts".

Included in the category of ongoing contracts would be virtually all of the agency's modernization projects, such as the advanced automation system, the voice switching and control system, terminal doppler weather radar, long range radar, next generation weather radar, Mode S, airport surveillance radar, radio control equipment, flight service automation system, automated surface observing system, and the systems engineering and integration program. Ongoing contracts also include those which support maintenance of the current infrastructure, such as the interim support plan and the replacement of AN/GRN-27 type instrument landing systems. Disruption of these contract schedules could cause the Government to lose cost savings achieved through competitive bidding.

Programs sustaining the current infrastructure include center modernization, tower replacement/modernization, upgrade of the traffic management system, high capacity voice recorders, radio frequency interference elimination, various navigational aids replacement programs, as well as numerous other programs.

The airport capacity enhancement category includes such programs as the Los Angeles basin facilities consolidation and expansion, the Mode C Intruder program, the Dallas/Ft. Worth metroplex expansion, the FAA support of the new Denver airport, and the relocation of the Chicago TRACON facility, among others.

In addition to the ongoing contracts and programs of the categories and types listed above, the agency has included in its request only three high-priority new starts, the Alaskan NAS interfacility communications systems, the new Austin airport project, and replacement work stations so that inspectors can access the aviation safety analysis system. While these programs, as new starts, may appear to be the most vulnerable to reductions, each has a unique, time-sensitive timetable which causes it to be an important part of the agency's request.

We are prepared to work with committee staff regarding specific program schedules.

SENATOR LAUTENBERG: Why do you believe that FAA warrants such special treatment, particularly when reductions are proposed in other transportation programs, such as highways, which by virtually any objective measure, is more important to both passenger and freight transportation?

ANSWER: By the year 2000, air travel is expected to nearly double its 1980 level. The FAA needs to spend at or near the FY 1991 request level over the next five years to stay ahead of the steadily increasing demands of the air transportation industry and assure access to all system users. This request supports the FAA's comprehensive plan to modernize and improve the nation's airspace system and air traffic control facilities. It also provides funds necessary to maintain and expand current equipment in the interim. This significant increase is necessary to keep pace with the implementation of major projects such as the Advanced Automation System to upgrade air traffic control computers, and the Voice Switching and Control System to modernize the system's outdated communications network. We must also fund near-term requirements to expand capacity and to support increased air traffic at several airport facilities.

F&E BUDGET JUSTIFICATION

SENATOR LAUTENBERG: Your request for travel and transportation of persons is up 25 percent, from $18.5 million to $23.1 million. Why is the increase needed? What would be the impact if these expenses were held at the fiscal year 1990 level?

ANSWER: The requested travel and transportation increase is predominantly associated with increased levels of personnel requirements based on workload distribution to ensure equipment is deployed, modified and relocated to meet systems and agency needs. If expenses were held at the FY 1990 level, Capital Investment Plan implementation schedules will be delayed, operational effectiveness of new state-of-the-art equipment would not be realized and essential FAA missions would not be met.

SENATOR LAUTENBERG: Your request for "other services" is up 43 percent, from $833.4 million to $1.2 billion. Why is this increase needed? For the record, please provide a detailed breakdown of this cost category for fiscal years 1990 and 1991.

ANSWER: The breakdown of cost category for fiscal years 1990 and 1991 "other services" is as follows:

	($000)	
OTHER SERVICES	FY 1990	FY 1991
PCS/Temp Storage	110	170
Repair & Maint. of Bldgs.	11,570	14,850
Repair & Maint. of Equip.	650	920
Training	2,910	4,170
Guard Service	50	60
ADP Contract Services	2,380	2,620
A-76 Contract Studies	670	960
Interest Penalty	250	200
Other Contract Services	814,830	1,170,713
TOTAL	833,420	1,194,663

This request is consistent with the Capital Investment Plan and represents FAA's mission requirements. The "Other Contract Services" line represents most of FAA's contractual services, major items in this category are shown below:

	FY 1990	FY 1991
Technical Support Svcs Contract	25,000	29,000
Sys. Engineering & Integration	85,000	95,000
Advanced Automation System	250,000	300,000
Voice Switching & Control Sys.	172,000	185,000
MODE S	18,000	30,000
NEXRAD	15,000	25,000
MODE C	10,000	35,000

IMPACT OF FUNDING ON MODERNIZATION SCHEDULES

SENATOR LAUTENBERG: It is my understanding that FAA's submission to OMB for FY 1991 F&E was for $2.8 billion.

In light of the decrease in FAA's F&E budget request mandated by OMB, has FAA performed an analysis on the impact of such a decrease on its ability to maintain the project milestones in the September 1989 NAS Plan document?

ANSWER: Most of the budget deferrals to accommodate the OMB dollar reduction were made without significantly impacting major procurement schedules. This was done by making small dollar reductions to a number of programs and spreading the funding out over additional funding years.

SENATOR LAUTENBERG: Which projects/activities were affected by the OMB reduction?

ANSWER: About 50 programs had some dollar reduction, the majority of which were $5 million or less.

SENATOR LAUTENBERG: Will these projects therefore be delayed?

ANSWER: Some of the projects will have minor schedule delays, although no major acquisitions will be affected.

ADVANCED AUTOMATION SYSTEM

SENATOR LAUTENBERG: Admiral Busey, you state that a significant part of the facilities and equipment increase is for the advanced automation system, the voice switching and control system, and the computer resources nucleus project. I'd like to look more closely at each of these systems.

In July 1988, the contract was awarded for the advanced automation system (AAS). In November 1989 (after only 16 months), the contractor announced a 13-month delay in the development of the initial sector suite system -- the initial major component of the AAS. Is it true you are now negotiating an additional 6-month delay to the development schedule?

ANSWER: We are modifying the contract to minimize the impact of schedule delays and reduce future risk, by providing an improved transition strategy, improved training capability, and improved testing capability. These changes are expected to add 6 months to the Initial Sector Suite Subsystem (ISSS) schedule making the first site (Seattle ARTCC) operational 19 months later than planned.

SENATOR LAUTENBERG: If this is true, can you tell me how you are going to spend the $556.3 million that you are requesting for AAS?

ANSWER: $260.5 million of the $556.3 million requested in FY 1991 is to fund the AAS acquisition contract. The peripheral adapter module replacement system segment of the AAS program remains on schedule, and related hardware and installation costs are still required in the FY 1991 time frame. Funding for the remainder of the AAS program, including AERA 2, is for continuing system development, and is still required in FY 1991.

$238.5 million of the amount requested is to prepare the sites for AAS equipment installation including the PAMRI with site installations beginning in FY 1991. These schedules were aggressive, and the FAA plans to continue these activities as originally planned to assure that the sites are ready when equipment is delivered.

The balance of funding requested is to provide continued systems engineering and technical assistance support, requirements validation support and test support.

SENATOR LAUTENBERG: What is FAA's current estimate of the projected delay in the schedule of the initial sector suite system? What problems have caused the delay?

ANSWER: We expect a 19 month delay in the operational readiness demonstration date of the Initial Sector Suite at the first operational site, Seattle ARTCC. Thirteen months of the delay is due to the inability of the contractor to translate design requirements resulting from controller man-machine interface testing into software coding, the unavailability and immaturity of Ada software compilers and programming support environment, and delayed availability of unannounced commercial hardware and software. The other six months delay is a result of FAA contract changes, to improve the site transition strategy, training capability, and testing capability.

SENATOR LAUTENBERG: If you were provided your request, what is the total amount of resources that you would have available to obligate for the AAS project?

ANSWER: We expect all of the FY 1990 and prior funding to be obligated during FY 1990. This will leave the FY 1991 requested amount of $556.3 million available for spending in FY 1991, and we plan to obligate all of that in Fiscal Year 1991.

SENATOR LAUTENBERG: It's my understanding that the second most critical component of the AAS, specifically the terminal advanced automation system, is also behind schedule by 10 months. Is that true?

ANSWER: Yes. The design of the TAAS is 10 months behind schedule.

SENATOR LAUTENBERG: Given the delays, why do you believe that you need over a half billion dollars in budget resources for fiscal year 1991?

ANSWER: As we discussed earlier, the schedule delay does not decrease our FY 1991 requirements.

SENATOR LAUTENBERG: What measures are being implemented to ensure that the revised schedule will be met? What is the probability that the revised schedule will be revised again?

ANSWER: The remaining award fee pool in the contract will be linked to specific key milestones which the prime contractor would agree to during negotiations to rebaseline the contract schedule. Therefore, the prime would clearly understand that this pool would be lost without any chance for recovery if schedules are not met.

In addition, extensive independent risk assessments have been conducted to ensure that the projected schedule delays are more accurate. These independent assessments will be used by the FAA during schedule rebaseline negotiations. Also, many new, smaller steps have been taken by FAA and IBM program management to improve communication and reduce technical risk. These measures will significantly reduce the probability of future schedule delays but cannot consider unforeseen problems or impacts due to delays of other programs.

SENATOR LAUTENBERG: Were all required design competition phase activities completed before the acquisition contract was awarded? If not, was time to complete remaining activities factored into the acquisition phase schedule?

ANSWER: Each AAS design competition phase (DCP) contractor was required to complete the critical design review (CDR) conference for the PAMRI and ISSS prior to acquisition contract award. Each did complete the conferences but not without remaining risks. Each contractor completed risk reduction activities during DCP. Risk reduction demonstrations were included in the acquisition contract to mitigate the remaining risks identified during DCP.

SENATOR LAUTENBERG: Are there outstanding requirements issues for the initial sector suite system that still have not been resolved?

ANSWER: No, the ISSS is still being developed to the original set of requirements included in the acquisition phase contract. The prime has had significant problems in translating these contract requirements into lower level design requirements and this has been a major contributor to the schedule delays. IBM has made significant progress in resolving these internal design requirements issues in the last several months and will have this problem, in hand, by the end of FY 1990.

The FAA is pursuing the modification of the contract to replace the contractual site transition strategy with one that has significantly less risk. Improved training and testing capabilities are being introduced without requirements issues.

SENATOR LAUTENBERG: FAA currently has 6 support contractors with subcontractors who provide technical and managerial guidance to FAA and monitor the efforts of IBM in developing the AAS. FAA employs approximately 93 personnel for the AAS project.

How is FAA able to effectively manage almost 2000 development and support contractor and subcontractor personnel with its limited number of employees?

ANSWER: The overall AAS program is managed on a functional basis; i.e., systems, software, hardware, testing, implementation, logistics support, etc. IBM is organized on this basis as is the AAS Division which is responsible for managing the IBM contract. Likewise, our support contractors are tasked on a functional basis. Functional support contractor teams, led by FAA managers, are utilized to conduct the necessary contract monitoring, technical reviews, and document review tasks. Detailed, monthly technical and status reviews are held between FAA functional teams and the IBM functional organizations. The results are summarized and integrated on a segment basis (ISSS, TAAS, etc.) through the contract technical officers, and provided to higher management during the monthly Program Management Reviews.

SENATOR LAUTENBERG: Did support contractors assist in developing the AAS acquisition schedule? Has their assistance helped or hindered in minimizing schedule delays?

ANSWER: Yes. Support contractors provide invaluable assistance in developing AAS acquisition schedules and analyzing schedule risk. The assistance includes developing detailed schedule networks, and doing the analysis required to minimize schedule impacts.

SENATOR LAUTENBERG: Was FAA satisfied with Martin Marietta's performance as the systems engineering and technical support contractor? Why was the new systems engineering and support contract not awarded to Martin Marietta?

ANSWER: The FAA has been satisfied with the performance of Martin Marietta in their support tasks to AAS. Much of the direct AAS support requirements were outside the scope of the Martin Marietta contract with FAA. In accordance with Federal Acquisition Regulations, the AAS systems engineering and technical assistance contract was awarded competitively.

SENATOR LAUTENBERG: Has IBM expressed any dissatisfaction with potentially conflicting guidance provided by the support contractor personnel?

ANSWER: No. Guidance is provided by the appropriate FAA representatives. Recommendations are provided to the FAA by the support contractors working on the functional teams described earlier. The FAA relies on the support contractor's input but ensures that any guidance to IBM is communicated by an FAA representative in accordance with the provisions of the acquisition contract.

SENATOR LAUTENBERG: What is FAA's projected delays for other AAS components and for the full AAS? Does FAA have an updated implementation schedule for all phases of the AAS? Provide the new schedule.

ANSWER: At this time, we are expecting a 19 month slip in operational introduction of the AAS segments that follow the initial sector suite. We are assessing ways to minimize that schedule impact. Detailed schedules are still being developed for all phases of the AAS program and can not be provided at this time since they will not be firm until negotiated with IBM. We will provide a copy of the new schedule of the entire AAS program when they are available.

SENATOR LAUTENBERG: If the terminal advanced automation system is delayed longer than 10 months for site delivery, what problems does FAA anticipate? Is there a back-up plan in the event of terminal advanced automation system schedule slippage to remedy anticipated problems?

ANSWER: At the area control facilities (ACF), the delay in terminal advanced automation system (TAAS) could be as much as 19 months because of the dependence on completion of ISSS. As a result, it is possible that capacity problems will be encountered at some of our larger terminal area facilities. Several backup plans are being investigated to address this contingency:
(1) upgrading selected sites to ARTS IIIE configurations;
(2) restructuring the AAS program to provide for early TAAS implementation at non-ACF sites; and (3) rehosting ARTS software on end-state hardware.

SENATOR LAUTENBERG: How is FAA factoring a revised schedule into the planning of other programs that interface with the AAS?

ANSWER: In revising schedules, FAA is constantly aware of the necessity to remain compatible with schedules of interfacing programs. The VSCS must be implemented prior to the AAS initial sector suite system (ISSS). At present, the schedule margin between VSCS operational readiness and ISSS implementation is about three months.

SENATOR LAUTENBERG: What types of problems does FAA anticipate as a result of AAS delays? How is FAA planning to remedy these problems?

ANSWER: The primary concern is that hardware and software destined for replacement might experience supportability problems. The Interim Support Program was initiated to address the terminal automation concerns. At this time no other problem areas are foreseen.

SENATOR LAUTENBERG: If development costs for this program escalate beyond the ceiling price stated in the fixed-price contract, do you intend to "hang tough" and require the prime contractor to pay all of those costs? If not, why not?

ANSWER: In the event that IBM should exceed ceiling price for the fixed price incentive items, we intend to "hang tough" and would expect IBM to pay all of these costs.

VOICE SWITCHING AND CONTROL SYSTEM

SENATOR LAUTENBERG: You also state that a major component of the facilities and equipment request is for the voice switching and control system (VSCS). What is the status of the project?

ANSWER: The VSCS prototype development contracts and the proposal evaluation process for selection of the winner for the production contract continue to run concurrently. In the prototype development, initial factory acceptance tests and controller tests have been performed and system deficiencies have been identified. The contractors are correcting the deficiencies. Following correction of deficiencies, additional factory and controller tests will be performed with the objective of verifying that the systems meet critical requirements and are operationally suitable. The proposal evaluation process is in progress and award is planned for later this year, the exact schedule being dependent upon the completion of contractor testing.

SENATOR LAUTENBERG: Has the FAA awarded a contract yet for this project? Has it started operational testing?

ANSWER: A VSCS production contract has not yet been awarded. Some operational testing in each contractor's facilities have been conducted by FAA controller teams. Full scale operational test and evaluation will be performed at the FAA Technical Center during the acquisition phase.

SENATOR LAUTENBERG: How much are you requesting for 1991, and how and on what activities would it be spent?

ANSWER: In FY 1991, $185,100,000 is requested to provide incremental funding for the acquisition contract, and to fund other program costs related to support contracts and regional implementation.

Activities that are planned for FY 1991 include: completing the production critical design review; completing the production readiness review; and, starting factory tests on the VSCS prototype upgrade.

SENATOR LAUTENBERG: Isn't it true that, at the end of this fiscal year, FAA will have $138 million of the $172 million provided still unobligated?

ANSWER: The VSCS contract award is scheduled near the end of FY 1990 at which time all of the $172 million will be obligated.

SENATOR LAUTENBERG: A GAO report to the Committee on the Voice Switching and Control System dated May 4, 1989, raised concerns regarding the adequacy of testing being applied to proposed systems, and recommended that in addition to completion of factory acceptance testing, FAA should require an independent verification of contractors' tests and should conduct an assessment of operational suitability.

The Committee recognizes the views expressed by the House on this matter in its report accompanying the FY 1990 Appropriation Bill, which required that FAA implement additional safeguards against inadequate testing out of available funds. Continued slippage of the award data for VSCS has occurred during the intervening year.

What is the status of the VSCS testing program, and what steps did FAA implement to address the Committees' concerns regarding adequacy of testing?

ANSWER: Each VSCS contractor has performed critical factory acceptance tests. The factory tests performed to date represent 90 percent or more of the factory tests required to demonstrate compliance with critical requirements. The FAA has identified specific areas of deficient performance in the factory tests. At this time, the contractors are revising their systems to correct these deficiencies. The FAA has also performed independent controller tests of each contractor's system. These tests revealed additional weaknesses and deficiencies which the contractors are addressing. The FAA has implemented the following steps which address the Committees' concerns regarding adequacy of testing:

- Prior to factory acceptance tests performed by the contractor, the FAA reviewed contractor tests procedures to assure a valid test and adequate system loading.
- Following factory acceptance tests, the FAA performed independent controller tests designed to assess operational suitability.
- The FAA identified weaknesses and deficiencies arising from factory tests and controller tests and is requiring the contractors follow-up to make the necessary design corrections and to perform retests to verify the systems.

SENATOR LAUTENBERG: What further testing is envisioned?

ANSWER: During the competition phase, we plan the following additional tests: factory acceptance retests to verify system corrections as a result of deficiencies identified in previous factory tests of critical requirements; controller retests to verify corrections to deficiencies identified in controller tests; and, factory acceptance tests of noncritical requirements to verify requirements not included in previous tests.

SENATOR LAUTENBERG: Of the funds appropriated for the VSCS program, how much remains available for obligation? Also, what is the impact of the additional testing on the availability of amounts appropriated to date?

ANSWER: As of the end of April 1990, $89 million of the $235.8 million appropriated to date has been obligated. Of the remaining balance, approximately $117 million will be obligated when the acquisition contract is awarded, and the balance will be spent to continue the prototype testing, support contracts, and implementation activities. Additional testing that we are doing during the prototype phase will reduce risk during the acquisition phase. Sufficient funding is available to cover the additional testing, but the additional testing was not a part of the VSCS funding plan and may cause the total program costs to rise accordingly.

SENATOR LAUTENBERG: GAO's most recent testimony on VSCS indicated that the VSCS schedule is under review. Please provide the Committee with the latest estimated schedule for completion of the procurement according to major milestones.

ANSWER: The schedule for completion of the procurement is highly dependent on the date for award of the production contract. The current target date for award is late this year; however, further delay by the contractors in providing prototype test results of sufficient quality to justify production award could cause further slippage in the award date. Following the award, the schedule for completion of the procurement is as follows:

	Months After Contract Award
Government acceptance of system delivered to FAA Technical Center	12
Operational readiness date at first operational site	37
Operational readiness date at last site	63

COMPUTER RESOURCES NUCLEUS PROJECT (CORN) -

SENATOR LAUTENBERG: In March 1989, GAO issued an initial report on CORN's objectives, cost estimates, and implementation approach (Computer Procurement: FAA's $1.5-Billion Computer Resources Nucleus Project [GAO-IMTEC-89-44FS, March 1989]). The report highlighted the tenfold increase in estimated project cost -- from $148 million to $1.5 billion -- that occurred as the project evolved between 1986 and 1987. GAO believes that the justification for the CORN project is not based on quantifiable data.

FAA claims that its 12 general-purpose computer facilities have problems which prevent them from providing adequate service to FAA employees. What studies has FAA done to pinpoint the cause of these problems?

ANSWER: In trying to "pinpoint" the cause of service level problems within computer systems, one must realize that computer systems are made up of numerous components, each of which may or may not be the limiting factor in a computer's performance.

Therefore, when one "cause" of the problem is found and corrected, almost invariably another component becomes the limiting factor and a new problem arises, making performance management/capacity planning an ongoing and continual process.

Within the FAA, each facility has the responsibility to establish and carry out its own performance management and capacity planning program with respect to its own computer system and to "pinpoint" its own problems. Therefore, it only makes sense to "pinpoint" performance problems as they relate to individual computer facilities, as part of their ongoing performance management programs. Not all of the actions taken to alleviate performance problems are documented in formal studies. However, the following is a brief list of studies that have been performed in this regard:

1974	FEDSIM Performance Study
1983	McAuto Performance Study
1984	Morino Performance Study and Acquisition of Performance Measurement Tools
1985	BGS Capacity Modeling Study
1985	FEDSIM Capacity Study of Data General Minicomputers
1985	FEDSIM/BGS Workload System
1987	CORN Requirements Analysis
1987	CORN Feasibility Study
1988	CPU Augmentation Requirements Study
1988	LIS Arthur Anderson Sizing Studies
1988	AVS Requirements Study

SENATOR LAUTENBERG: Does FAA collect information from all of its 12 general-purpose computer facilities that allow the agency to determine how heavily utilized these facilities are? If so, please describe the process used to do this.

ANSWER: Yes. The agency does collect such information. In accordance with OMB requirements, the FAA has instituted Phase I (cost reporting) of a chargeback system. Through this system, the amount of computer resources utilized by each computer user at each facility are totaled each month and summarized according to facility, program area, and organization. Monthly reports are produced on an agencywide basis and are on file since the first phase of the Chargeback System was begun in June 1986. The summation of these utilization values show how heavily the individual computer facilities are used.

In addition to the chargeback data, each facility gathers and analyses its own, more detailed computer utilization data as part of its ongoing performance management/capacity planning program. Because of the large volume of this data and its use to primarily resolve short-term, "turning" problems, the more detailed data is not maintained for very long periods of time.

SENATOR LAUTENBERG: Does FAA record and track the growth in the use of its 12 general-purpose computer facilities? If so, please describe the process used to do this.

ANSWER: The studies (made in the past), when taken together, show the growth in the use of the FAA's computer facilities since 1974. Since June 1986, the FAA has maintained detailed and consistent monthly records of computer usage, which are gathered as part of the Chargeback System. Through this system, the amount of computer resources utilized by each computer user at each facility are totalled each month and summarized according to facility, program area, and organization. Monthly reports have been produced on an agencywide basis since June 1986.

SENATOR LAUTENBERG: Does FAA routinely measure how quickly the computers at each of the 12 facilities respond to user commands? Please provide the Subcommittee with any available data on user response times.

ANSWER: Each facility, as part of this ongoing performance management/capacity planning program, establishes how and with what regularity computer response time will be measured. At the FAA's Aeronautical Center (which processes 60 percent of the agency's total computer workload), the response time of all local terminals (approximately 200) is monitored on a continual basis and analyzed. A graph of response times averaged by quarter is attached for the period from 1987 to the present.

Because of the nature of the operating system employed at the FAA's other facilities (using Data General minicomputers), response times cannot be measured by the computer itself and must, therefore, be measured indirectly or through the use of very expensive and labor-intensive hardware monitors. Because of this difficulty in accurately measuring computer response time, the minicomputer facilities carry out such measurements only when conditions become extreme or to analyze the results of computer tuning efforts. Since these measurements are carried out only on a facility basis and usually are not performed at the same time among the facilities, no agencywide statistics are available on current computer response time at the minicomputer facilities. However, as part of the CORN Feasibility Study (1987), nationwide indirect measurements of computer response times were made, which showed that the national response time average was four seconds at that time, as opposed to the two second requirement of the agency.

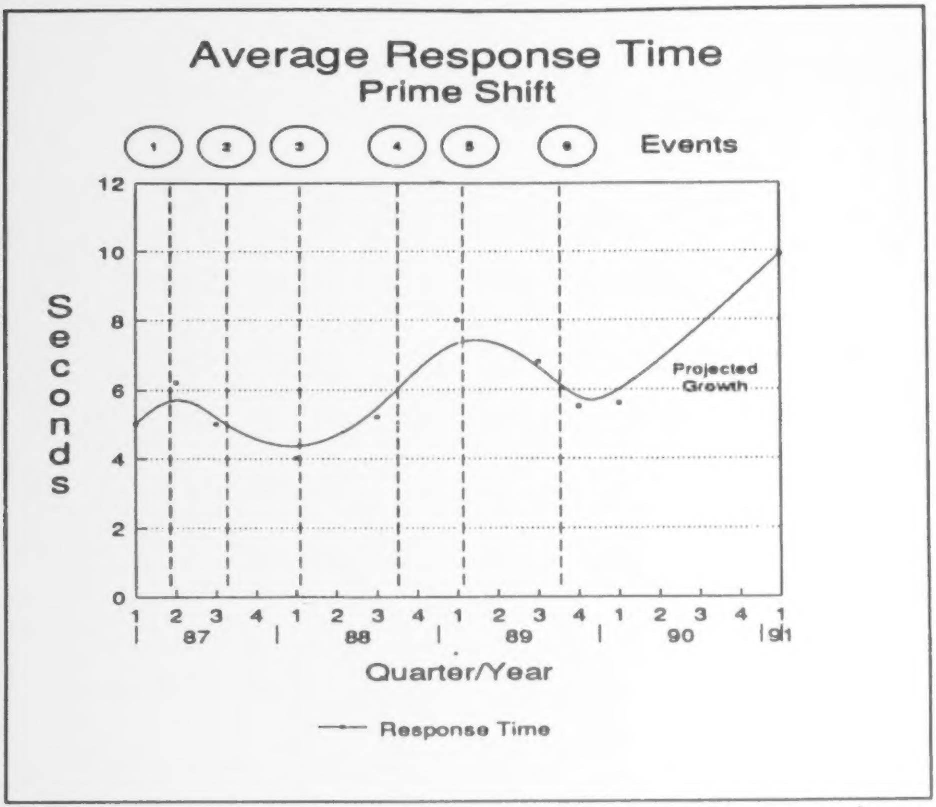


Figure 1 Response Time to User Transactions at AAC

Events Affecting Response Time

1: Installed IBM 3084 (2/87)
2: Installed New Disk (3/87)
3: DOT-wide Accounting Added (1/88)
4: Coast Guard Added (3/88)
5: 64 MB Main Memory Upgrade (1/89)
6: Application Fine Tuning (3/89)

SENATOR LAUTENBERG: The current system is made up of over 270 application programs with nearly 15 million lines of code. Why has FAA chosen to use only two small computer programs made up of 12,000 lines of code to determine how accurately the vendors have developed computer systems which will meet FAA's needs over the 10-year life of the CORN contract?

ANSWER: Each proposal is given a thorough and detailed evaluation via a multi-stage process. The FAA has developed an extensive and thorough evaluation methodology which includes comprehensive cost and technical evaluations; a demonstration of the offeror's capacity analysis/planning model, to show the degree to which the offeror's proposed computer system and subsequent changes thereto can meet the projected 10-year workload requirements of CORN; and a two week operational capability demonstration (OCD).

It is this OCD stage of the process in which the 12,000 lines of code are used. The OCD validates the offerors' responsiveness to CORN requirements in four areas: the minimum proposed computer configuration, capacity analysis and planning, conversion, and functional capabilities. The use of the 12,000 lines of code is not intended to demonstrate the workload capacity of the offeror's proposed computer system, but rather to demonstrate the offeror's expertise in conversion. (The 12,000 lines of code were selected from two representative information systems that characterize the majority of the conversions that the vendors will be facing.) It is through the capacity analysis/planning model that the offerors must demonstrate that the configurations and upgrades proposed can provide the required service levels over the 10-year life of the contract. The actual operation of the converted code serves as another validation of the offeror's claims.

SENATOR LAUTENBERG: What are the cost ramifications of incorrectly validating the accuracy and reasonableness of a vendor's proposed CORN system?

ANSWER: The FAA believes that the validation/evaluation methodology that it has developed will correctly and accurately validate the reasonableness of the offeror's proposed systems and will reveal any inadequacies. To validate the evaluation methodology for CORN, the FAA asked Mr. Philip J. Kiviat, an internationally recognized authority in the field of computer performance evaluation and the first Director of the Federal Computer Performance Evaluation and Simulating Center (FEDSIM), to review the CORN evaluation methodology. He found the CORN evaluation methodology a good example of "conjunctive gaming" and a practical solution to an inherently difficult problem.

SENATOR LAUTENBERG: FAA's current cost estimate for converting applications is approximately $5 per line. Industry averages for conversion are approximately $15 to $20 per line. Why is the average cost of CORN conversion significantly lower?

ANSWER: The FAA estimate for converting its application systems was developed as prescribed in the GSA Conversion Cost Model (Version 4).

Further, the GSA Conversion Management Handbook, Chapter 8, says, in part, "The variables that affect cost of conversion include--the inventory to be converted: number of programs by language, number of lines of code, number and type of files; difference between source and target environments; size and scope of work to be performed (e.g., conversion and unit test only or all tasks from baseline preparation to acceptance test); type and quality of tools used; productivity of individuals performing the conversion." The handbook continues, "Because of the variables, there is no such thing as an average cost-per-line figure in conversion."

SENATOR LAUTENBERG: Break out the $7 million requested for contractor support.

ANSWER: The Facilities and Equipment (F&E) FY 1991 budget request includes $25.0 million for the prime CORN contractor support. Of this, $7.0 million is the estimated operations costs for processing converted FAA applications at the CORN contractor-provided facilities.

SENATOR LAUTENBERG: What will FAA get for the $18 million requested for software conversion?

ANSWER: Ordered conversions include planning, actual code conversion, complete testing and operational documentation, and training of user and application maintenance staffs. The timing of application conversion will be determined after contract award when the target computer configuration, and the fixed-price cost for each application conversion, are known.

SENATOR LAUTENBERG: FAA's cost estimate for converting current applications to CORN is $74.5 million. This estimate, however, does not include the cost of fully documenting the converted applications. What is FAA's estimate of the total cost of all the conversion work? Why does FAA continue to use the $74.5 million estimate in its budget statements?

ANSWER: The original estimate was developed based on the GSA Conversion Cost Model (Version 4). This model addresses certain basic documentation needed to operate the converted systems and costs for these documents are included. Later, analysis indicated that some user documentation had become obsolete and updated versions would be needed; but not mandatory for conversion work under the CORN contract or user operations. We estimate that this additional documentation, not within the scope of CORN, would add $25.0 million to the cost. We have continued to use $74.5 million because this estimate was developed under the GSA Model and reflects documentation mandatory for system operations.

SENATOR LAUTENBERG: FAA originally estimated that the conversion to CORN would take 18 months. After the project was approved, FAA revised the estimate to 3 years. Why has the conversion timeframe doubled before any work has even started?

ANSWER: The original estimate of 18 months for conversion was developed early in the project and reflected advice from industry. Because of FAA staffing scheduling and funding level approvals, the overall schedule was extended to a total of 30 months.

The key decision memorandum, signed by the Deputy Secretary, and which gave approval to proceed with Project CORN, was based on information clearly showing a 30-month transition period. The remaining six months, to reach the 36 months cited in the question, will be devoted to full operations of the CORN host facilities. We believe that this conservative approach is appropriate before the FAA makes final decisions concerning disposition of the current general-purpose computer facilities.

SENATOR LAUTENBERG: FAA provided vendors with data on the operation of its current system to help them determine how to design a new system to meet projected requirements. Was FAA aware that critical information on the operation of the current system was missing from the provided data? How are the vendors supposed to compensate for the lack of this information on the current system?

ANSWER: The cited material was provided for information purposes only. It is not necessary for the design of a system to meet projected requirements. The RFP, including the CORN documentation package, contains all the data necessary to design a responsive ADP resource.

SENATOR LAUTENBERG: FAA estimates that it will need to provide 85 employee-years of support for the conversion. Have all of the FAA program offices reviewed and agreed with this estimate?

ANSWER: FAA program offices have reviewed and agreed with this estimate.

SENATOR LAUTENBERG: Have you determined whether the FAA program offices have enough staff to support the conversion while carrying out their regular duties?

ANSWER: The FAA believes that with the planned CORN conversion schedule, program offices can support the conversion and continue regular duties. Where necessary, FAA staff will be supplemented with contractor support to handle peak workload periods.

SENATOR LAUTENBERG: Have you determined whether the program offices will need to obtain contract help to assist their staff with the conversion tasks?

ANSWER: The CORN implementation directive contains data on the conversion schedule and required employee support. Program offices have been advised to assess these data to determine the need for local contractual assistance. However, a specific answer cannot be given because the target computer configuration, conversion approach, and application conversion scheduling, all of which impact agency staff/contractor workload, cannot be determined before contract award.

SENATOR LAUTENBERG: Have you completed a preliminary schedule for the conversion of the application systems that indicates FAA staffing needs and availability? Have FAA program offices concurred with this schedule?

ANSWER: The agency has prepared and is currently coordinating a preliminary overall CORN conversion schedule. It contains estimates of staffing needs for each office for each month of the transition period. Tentative agreements reached on this schedule are subject to review based on the contract as awarded.

SENATOR LAUTENBERG: What will be the cost of continuing to operate the current system while the conversion to CORN takes place?

ANSWER: It is estimated that the added operating cost for the current system is $35 million per year for each year of the transition period, for a total of $105 million.

SENATOR LAUTENBERG: In view of FAA's plan to convert and run all general-purpose agency applications on CORN, why is almost $100 million in funds needed for the aviation safety analysis system?

ANSWER: The funds requested for Project CORN, including the $25 million requested for FY 1991, cover costs for converting existing applications and their processing during the transition period. Thereafter, program offices will separately fund their processing costs. New developments, enhancements to applications such as the aviation safety analysis system and costs other than these identified to be covered by the CORN project such as end user workstations acquired through the OATS contract, must be funded by the program offices.

SENATOR LAUTENBERG: The Committee is advised that only one company bid for the CORN prime contract. Is that true? Why?

ANSWER: It is inappropriate for FAA to provide procurement sensitive information.

IMPACT PROJECT

SENATOR LAUTENBERG: On July 27, 1987, former Administrator McArtor announced the IMPACT '88 program. The program was based on eight initiatives, designed to increase the agency's effectiveness and to enhance public confidence in aviation. The initiatives addressed aircrew performance, airline accountability, airport development, airspace capacity, advanced technology, aviation awareness, air transportation security and agency effectiveness.

What is the current status of IMPACT '88 as a stand-alone program? Is it still being managed by a designated group or individual? What is the name of the effort?

ANSWER: IMPACT '88 has not been centrally tracked as a stand-alone program since October 1, 1989. In fact, even during the period when it was actively tracked, IMPACT '88 was not a true stand-alone program. It was primarily an umbrella program under which many pre-existing initiatives within FAA were marshalled in order to strengthen their focus and direction. Former Administrator McArtor and FAA senior management saw the need for such an umbrella to communicate to the public and employees how ongoing individual initiatives fit within the overall mission and management strategy of the FAA. IMPACT '88 has been discontinued because it has served its purpose, and the associated tracking and reporting system is no longer needed.

There were never staff at any level solely dedicated to managing IMPACT '88 as a centralized tracking and reporting system, it was handled as a collateral duty assignment. Presently, the appropriate program offices are responsible for managing the individual initiatives, but there is no longer centralized reporting.

SENATOR LAUTENBERG: If the effort has been terminated, which initiatives have been subsumed by other programs and which have been terminated outright? Since many of these programs were seen as long-term initiatives, what was the reason for termination?

ANSWER: Two projects were cancelled and subsumed under other initiatives. The first was the Capacity Action Plan, because the subject was addressed by the Secretary's National Transportation Policy. The second, a project entitled, "U.S./FAA Influence in the International Community," was an initiative to establish FAA representatives and operational offices in the Far East. It was cancelled because the subject of FAA overseas staffing is now addressed in the FAA Overseas Staffing Plan.

Only one program was terminated, a proposal to establish a federally-funded research and development center (FFRDC). That initiative has subsequently been resurrected. On or about June 1, 1990, the third and final notice of FAA intention to establish the FFRDC through the sponsorship of the MITRE Corporation will be announced in the Commerce Business Daily.

SENATOR LAUTENBERG: What functions have IMPACT '88 staff been assigned to since Admiral Busey's coming on-board?

ANSWER: As noted above, aspects of IMPACT '88 were managed at three levels in FAA: special assistants to the administrator performed review and liaison duties, staff within the Office of Management Systems administered the central tracking system, and the various line organizations of the FAA involved in implementing the initiatives reported on progress. These were collateral duties. There were no staff dedicated solely to the IMPACT '88 program.

The special assistants to Former Administrator McArtor who were monitoring the reporting have departed with the change of Administrations. Analysts involved in tracking and reporting have been assigned other staff duties within their respective organizations. Program managers for the individual IMPACT '88 initiatives continue to manage those projects, but no longer report on their status to a single, central point.

INTERIM SUPPORT PLAN

SENATOR LAUTENBERG: Three years ago, FAA introduced the concept of the Interim Support Plan (ISP). The program was initiated for two reasons: (1) equipment shortfalls that were occurring because of NAS Plan delays, and (2) unforeseen traffic increases, including hubbing at specific locations.

The Subcommittee understands that, despite FAA's earlier characterization of urgent interim needs, some of the ISP projects are no longer to be completed in fiscal year 1991. What is the new estimate?

ANSWER: Because of the numerous quantities of equipment and the complexity of some of the projects funded through the Interim Support Program (ISP), the FAA did not plan to complete all of the projects in fiscal year (FY) 1991. However, the FAA did intend that the funding requirements for the ISP would be available by the end of FY 1991. Due to subsequent budget reductions, it is now planned to request the remainder of the necessary funds in the FY 1992 budget submission. All of the projects funded through the ISP should be completed early in FY 1996.

SENATOR LAUTENBERG: At the end of fiscal year 1989, FAA had obligated only 30 percent of that year's appropriation for ISP. Why did first year ISP spending start so slowly?

ANSWER: During Fiscal Year 1989, obligation of FAA funds was subject to the following constraints:

1. The FAA requested reprogramming to remove $43 million from the ISP, and approval to reprogram $11.5 million was granted July 1989.
2. FY 1989 was the first year funds were available and procurement requests could not be processed until then.
3. Fulfillment of legal requirements and negotiations with potential suppliers are often time consuming.

SENATOR LAUTENBERG: FAA believes other interim projects will be necessary before NAS Plan is fully implemented, and is requesting an additional $99 million in 1991. What additional projects does FAA foresee and what will be the cost of these projects?

ANSWER: The $99 million request for fiscal year 1991 is part of the total Interim Support Program cost. It does not represent a request for funds for additional projects.

SENATOR LAUTENBERG: It is my understanding that FAA's own engineering and integration contractor estimated that seven of the original 10 ISP projects were not cost beneficial. Is that true?

ANSWER: The System Engineering and Integration Contractor prepared a cost benefit analysis. The FAA does not agree with the analysis because the procurements are based on mission needs and safety. The emphasis of the program is on solving existing capacity and technical problems and maintaining aging equipment.

The FAA did complete a cost benefit analysis for the ASR-9 establishment project that is funded through the ISP. Of the original 11 radar establishments, three were eliminated because they were not cost beneficial.

The ISP will have a positive effect on both FAA operations and the airspace users. Benefits to the users will be in the form of fuel economy, reduced delays, and overall system efficiency. The FAA benefits will be in terms of air traffic productivity and efficiency. There will also be improvements in the reliability, maintainability, and availability of systems and equipment.

SENATOR LAUTENBERG: Why did FAA proceed to ask for funding for these projects if they were not cost beneficial?

ANSWER: As previously stated, the FAA believes that the Interim Support Program (ISP) procurements are required for mission needs and safety. The procurements are for areas that were identified as requiring enhancements and/or additional equipment to ensure the continued safe and efficient operation of the air traffic control system as the National Airspace System Plan programs evolve through the implementation phase.

SENATOR LAUTENBERG: What level of system reliability does FAA aim to operate at with the individual ISP actions it has identified? What would the level be without the ISP?

ANSWER: The purpose of the Interim Support Program is to improve the current reliability, maintainability, and availability for those systems being supported by the program. The FAA believes that without the ISP, overall system reliability would be reduced. The following are specific improvements being implemented by the ISP:

ARTS III/IIIA/En Route Automated Radar Tracking Systems (EARTS)

Many unique components and subassemblies are currently in short supply or unavailable (i.e., disk drives, keyboards and trackballs, and subassemblies unique to the EARTS system). Therefore, maintenance of this equipment is difficult, costly, and is impacting maintenance workload as well as system availability.

Since core memory is no longer manufactured, maintenance of the present ARTS IIIA core memory modules is expensive. The replacement of core memory with solid state memory will facilitate maintenance and supply support of the existing ARTS IIIA equipment.

ARTS II

ARTS II system reliability, maintainability, and availability has become more critical as air traffic levels at many ARTS II facilities approach those of ARTS III. Two areas which have an adverse effect on ARTS II system availability are its susceptibility to power drops or surges and its magnetic tape subsystem which has no backup. Records indicate that 90 percent of all system failures and interruptions are power related. In addition, the magnetic tape subsystem, which is used for program loading/recovery and data extraction, contains a drive motor which is no longer manufactured and is in short supply.

LONG RANGE RADAR

The Air Route Surveillance Radar (ARSR-1/2) and Military Primary Radar (FPS-20) family of long-range radars are vacuum tube designs and have been in service for over 25 years. These systems require intensive maintenance. These facilities are maintained by technicians at or rapidly approaching retirement age. It is becoming increasingly difficult and costly to train entry level technicians to staff these facilities since they generally have little or no experience with outdated vacuum tube technology.

CAPTURE EFFECT GLIDE SLOPE CONVERSION KITS

To improve ILS reliability and meet clearance requirements for category II equipment, 55 "capture effect" glide slope conversion kits will be procured for those glide slope facilities affected by obstructions.

WEATHER SENSORS

Much of the FAA's airport weather sensing equipment (cloud height indicators and remote readout hygrothermometers) in air traffic control tower facilities is experiencing an increasing rate of failure due to its age. There are supply support problems associated with this obsolete hardware. Maintenance of this equipment is no longer cost effective and the FAA's ability to provide reliable weather information is being jeopardized. AWOS equipment for these facilities will not be available until the 1993 to 1995 time period.

INTEGRATED COMMUNICATIONS SWITCHING SYSTEM (ICSS) BACKUP

During an ICSS failure a means of providing a limited number of independent backup frequencies is required for controllers to maintain an orderly flow of air traffic.

SENATOR LAUTENBERG: What specific capacity increases will the ARTS IIIAs and ARTS IIs receive and how does this compare with the workload levels projected for these facilities?

ANSWER: Equipment will be provided to facilities based on air traffic control and system maintenance priorities. The following procurements are to enhance ARTS IIIA and ARTS II capacity:

ARTS III

Additional ARTS IIIA Radar Positions. Establishment of additional radar positions utilizing a combination of Full Digital ARTS Displays (FDAD's) and ARTS III Data Entry and Display Subsystems (DEDS), as well as ancillary equipment (communications, clocks, etc.), will accommodate continued air traffic growth and eliminate the output display overload problem known as "flicker" now encountered at some ARTS IIIA facilities. This will be accomplished through the procurement of 100 FDAD's for a limited number of major ARTS IIIA facilities. Some of the displaced DEDS from these facilities will be used for expansion positions, due to training and projected growth, at less busy ARTS IIIA locations.

ARTS III Solid State Memory. By replacing the existing core memory with solid state memory, a benefit of approximately 20 percent increase in processing efficiency at single sensor sites and 30 percent at dual sensor sites can be attained. This will permit the central track store tables to be increased by approximately 20 percent, thus increasing ARTS IIIA aircraft tracking capacity.

ARTS II

Separate Flight Plan File. The ARTS IIA software will be modified to create a separate file for flight plans. Forecasts suggest that the size of this table is insufficient for use as a file for all of the data. A separate file for flight plans would also make available additional files for unassociated targets to meet future growth requirements.

Multi-Sensor/Multi-Processor ARTS IIA. The procurement of dual sensor, dual processor ARTS IIA systems is proposed for the largest ARTS IIA locations and those ARTS IIA locations requiring dual radar coverage. Forecast traffic data indicates that these facilities have reached, or will soon reach, system capacity for either displays or sensors. The addition of a second processor, in addition to providing expanded display capacity and/or sensor capacity, will also provide a backup level of operation in the event of a processor failure. ISP will provide funding for the first site and the contract will have options for the remaining sites.

Additional ARTS IIA Radar Positions. Establishment of an additional 158 ARTS IIA radar positions utilizing ARTS IIA Radar Alpha/Numeric Display Subsystems (RADS) and ancillary equipment (communications, clocks, etc.), will be required. Some of these will be operational positions at ARTS IIA facilities to accommodate continued air traffic growth, and the remainder will be used for training to take advantage of the off-line training capability of the ARTS IIA system. This is preferable to training controllers on operational displays that are vital for air traffic operation.

SENATOR LAUTENBERG: To date, the ISP has received $210.4 million. How much of this will be obligated by the end of FY 1990?

ANSWER: The FAA estimates that $130.3 million (62 percent) of the total ISP funds for fiscal years 1989 and 1990 will be obligated by the end of FY 1990.

SENATOR LAUTENBERG: You are asking for an additional $99 million. How would this money be spent (identify the projects and expected obligation dates for each)?

ANSWER: The FY 1991 budget submission is for the following projects and amounts:

Project	FY 91 (In Millions of Dollars)
ARTS III Solid State Memory	3.0
ARTS III Keyboards/Trackballs/ Software/Ancillary equipment	0.1
ARTS III Radar Positions	9.3
Long Range Radar Upgrades	0.2
ARTS II Tape Drive Replace	2.3
ARTS II Radar Positions	14.8
ARTS II Uninterruptible Power System	7.5
ICSS Backup	4.0
Airport Weather Sensors	1.9
ASR 9 Establish	52.6
ISP Program Support	3.3
TOTAL	$99.0

With the exception of the $200,000 for the long range radar transmitter modifications and the $3.3 million for program support, these projects will be in the second or third year of procurement. Therefore, the FAA anticipates that almost 100 percent of the funds will be obligated during FY 1991.

SENATOR LAUTENBERG: What are the outyear costs for this program (by year)?

ANSWER: The estimated cost to complete the ISP program is $120.3 million which is tentatively planned an FY 1992 request.

SENATOR LAUTENBERG: List each project within the ISP and costs by year associated with each project.

ANSWER: The following funding profile details the ISP programs and associated costs:

INTERIM SUPPORT PROGRAM

Funding Requirements: (in millions of dollars)

FY 89	FY 90	FY 91	Planned FY 92	Total
138.5	71.9	99.0	120.3	429.7

Funding Profile:

Project	FY 89	FY 90	FY 91	Planned FY 92 1/	TOTAL
ARTS III Solid State Memory	41.5	3.0	3.0	0.0	47.5
ARTS III Keyboards/Trackballs/ Software/Ancillary equipment	5.2	1.0	0.1	0.0	6.3
ARTS III Radar Positions	60.2	6.5	9.3	7.4	83.4
ARTS III Disk Drive Refurbish	7.9	0.0	0.0	0.0	7.9
ARTS II Separate Flight Plan	.3	0.0	0.0	0.0	.3
ARTS II Multi-sensor Process	4.8	0.0	0.0	0.0	4.8
Long Range Radar Upgrades	7.3	0.0	0.2	36.0	43.5
ILS (GRN-27) Replace	4.0	0.0	0.0	10.0	14.0
ILS Glide Slope Antennas	7.3	0.0	0.0	0.0	7.3
ARTS II Tape Drive Replace	0.0	3.1	2.3	0.0	5.4
ARTS II Radar Positions	0.0	23.5	14.8	2.5	40.8
ARTS II Uninterruptable Pwr System	0.0	0.0	7.5	0.0	7.5
ICSS Backup	0.0	4.6	4.0	8.4	17.0
Airport Weather Sensors	0.0	3.2	1.9	0.0	5.1
ASR 9 Establish	0.0	27.0	52.6	56.0	135.6
ISP Program Support	0.0	0.0	3.3	0.0	3.3
TOTAL	138.5	71.9	99.0	120.3	429.7

1/The FY 1992 column represents a planning estimate subject to further FAA reviews.

SENATOR LAUTENBERG: How has your estimate of the total costs for this program changed and why?

ANSWER: The FAA's original estimate of the total cost of the Interim Support Program has changed. The original cost estimate for the total program was $517,000,000. However, three proposed radar establishments were not shown to be cost beneficial, and those costs were deducted. This reduced the total program cost to $429,700,000.

FIELD IMPLEMENTATION OF NAS PLAN EQUIPMENT

SENATOR LAUTENBERG: After last year's hearings, this Subcommittee directed FAA to report its total field implementation staffing requirements and its shortfall of resources, along with an analysis of how it plans to address this shortfall. FAA was required to submit this analysis by February 1990. FAA has not complied with the Subcommittee's direction as of yet.

Why has FAA been unable to complete its analysis and when does it expect to be able to do so?

ANSWER: The report has been delayed due to the large amount of staffing data which must be collected and analyzed in order to assess Operations Appropriation-related requirements. As indicated in the agency's request for an extension, an interim report was promised for delivery in May. This interim report explains our human resource planning accomplishments and provides details concerning strategies under consideration for meeting requirements. A draft version of this interim report has been provided to GAO; it should be reaching your subcommittee in the near future. The final report and action plan will be available in February 1991.

SENATOR LAUTENBERG: How can FAA assure integrity of its current milestones until this analysis is complete?

ANSWER: The agency has completed its assessment of a significant portion of the additional human resource requirements needed for meeting NAS Plan facility and equipment (F&E) installation goals, and has taken actions to meet these requirements by requesting additional F&E positions, diverting SEI contractor capabilities to meet field implementation requirements, planning to fully utilize the contractor support provided by the TSSC, and considering a wide variety of strategies to meet remaining shortfalls. The agency is now in the process of assessing and validating the potential need for additional Operations Appropriation-related personnel to meet transitional requirements. Three studies are being completed for this purpose. The combined results of the Air Route Traffic Control Center Human Resource Requirements Study, the Terminal and General NAS (TAG) Human Resource Requirements Study, and the Other Facilities Human Resource Requirements Study will yield an overall assessment of any additional human resources required for meeting NAS Plan implementation requirements. Any such requirements will be mitigated with a wide variety of action plan strategies. The plans call for reporting these findings and recommendations in February 1991.

SENATOR LAUTENBERG: Although the analysis is not complete, it appears from GAO's testimony that a significant shortfall does exist. Is this accurate and does FAA know which possible solutions to the shortfall are most likely?

ANSWER: Until the analysis is complete we won't know whether or not there is a shortfall. Both FAA and GAO must rely on projected schedules and assumptions about future deliveries and staffing. This makes it difficult to pinpoint whether or not a shortfall exists and more precisely the magnitude of it. We have requested 375 F&E positions in FY 1991 and intend to request additional positions in FY 1992. We will continue to utilize the Technical Support Service Contract and other support contracts such as A&E and SEI.

SENATOR LAUTENBERG: FAA plans to issue a Human Resource Management Plan this fall along with its new Capital Investment Plan. Will this plan address human resource needs for all NAS Plan systems as implied in the latest edition of the NAS Plan. If not, when does FAA estimate it will be able to do so?

ANSWER: The agency is developing a long-term NAS Human Resource Management Plan which will cover all NAS implementation requirements. This plan will be fully developed for all projects by 1993; but, is being provided in increments as individual planning efforts are completed. The first edition of this ongoing and annually updated plan includes provisions for transitioning the Initial Sector Suite System (ISSS) to an operational environment and the associated Voice Switching and Control System (VSCS) and Peripheral Adaptor Module Replacement Item (PAMRI) for five of the FAA work forces: Airway Facilities, Air Traffic, the FAA Academy, the FAA Depot, and the Technical Center. The completion of this first plan will be later in 1990.

SENATOR LAUTENBERG: In its reply to GAO's report on field implementation last year, FAA promised to have its new Regional Project Management System (RPMS) fully operational by January 1990. However, RPMS is still not fully operational at all sites. Why has implementation of this new system been delayed and what is FAA's new estimate for completion of all RPMS modules?

ANSWER: The implementation delays were due to late software completion and data transfer and processing constraints. The RPMS schedules and resource modules were completed on May 30, 1990.

NATIONAL GRAPHICS WEATHER DISPLAY SYSTEM

SENATOR LAUTENBERG: Last year, this Subcommittee directed FAA to keep in place its current interim weather graphics systems while GAO performed an analysis of the proposal for a new nation-wide system.

There are no F&E funds requested for the purchase of a new national weather graphics system in fiscal year 1991. Has FAA's acquisition strategy for a nation-wide system changed? Are requirements being added, deleted or clarified in a new set of specifications and when is the expected issuance to industry?

ANSWER: Our strategy has not changed. The FY-1990 Report language restricted funding for the weather graphic display system. Consequently, we elected to defer any additional request until the matter was resolved. The restrictions have been removed. We plan to submit another request for funding and anticipate a contract award in FY 1992, subject to the normal budgetary review process.

SENATOR LAUTENBERG: Starting in October 1989, how many additional flight service stations will be installed with interim graphics weather displays until the new nation-wide system is deployed?

ANSWER: Interim graphic systems will be required for 13 of the 15 AFSS's that remain to be commissioned. The last two AFSS's are scheduled for commissioning in FY 1993 and therefore should be equipped from the planned national contract. The 15 AFSS's are as follow, with Honolulu and San Juan being identified as the last two AFSS's.

AFSS
Jonesboro, AR
Gainesville, FL
Albuquerque, NM
Greenwood, MS
Rancho Murieta, CA
Buffalo, NY
Great Falls, MT
Casper, WY
Boise, ID
Fairbanks, AK
Juneau, AK
Elkins, WV
Oakland, CA
Honolulu, HI
San Juan, PR

SENATOR LAUTENBERG: Will regions continue to have the authority to lease these interim systems or has FAA centralized all future interim acquisitions in headquarters?

ANSWER: The regions will continue to acquire the subject equipment until the national program is in place.

SENATOR LAUTENBERG: Which specific flight service stations will benefit from the requested $2 million for fiscal year 1991? Why were these specific flight service stations chosen?

ANSWER: The requested funding is essential to provide interim systems for the seven AFSS's that will be commissioned in FY 1991 and to maintain/expand the interim systems that are in use at the 46 AFSS's that are currently operational. This interim funding is essential because the FY 1990 Report language restricted funding for the national weather graphic display system. The seven AFSS's that will get interim systems in FY 1991 are as follow:

Fairbanks, AK
Juneau, AK
Boise, ID
Buffalo, NY
Great Falls, MT
Elkins, WV
Casper, WY

FULL FUNDING CONCEPT

SENATOR LAUTENBERG: Last year, the Subcommittee asked FAA to submit a list of F&E projects that were not under a full funding concept and why. (Reference Fiscal Year 1990 Hearings page 573.)

Please update the list of F&E projects that are not under the full funding concept and provide reasons why.

ANSWER: In general, for major high cost programs with a small number of facilities, a modified budgetary approach is being applied to equate the appropriation request with the planned obligations with the objective of reducing carryover.

PROJECT	FY-91 BUDGET SUBMISSION	DEFERRED AMOUNT
1a(1) Long Range Radar (LRR) Program	$75,200,000	$17,000,000

This joint FAA-Air Force program is funded at a level of $75,200,000 in the FY 1991 budget, which is the FAA share of the cost to be obligated in FY 1991 for hardware for nine locations and on-site spares, test equipment and site implementation for 26 sites. Funding in the amount of $17,000,000 is deferred one year and will be needed in FY 1992.

1a(3) NEXRAD	$24,736,000	$ 7,200,000

This joint FAA, U.S. Air Force, and the National Weather Service program is funded at a level of $24,736,000 in the FY 1991 budget which is the FAA share of the cost to be obligated for the National network radars, spare parts, field and program support. Funding in the amount of $7,200,000 is deferred one year and will be needed in FY 1992 for installation support and training.

1b(1) Advanced Automation System (AAS)	$556,300,000	N/A
1c(7) Voice Switching and Control System (USCS)	$185,100,000	N/A
3a(1) Flight Service Station Modernization	$ 47,800,000	N/A

Because of the magnitude of these programs, best procured on a long term phased implementation basis, the FAA never planned to fully fund these projects in one program year. FAA has budgeted these major efforts on an annual basis as ongoing subelements of a multi-year contract. In every instance, the full cost-to-complete has been reported in budget backup material to OST, OMB, and the Congress.

2a(1) Terminal Doppler Weather Radar (TDWR)	$ 83,700,000	$ 3,000,000

The FY 1991 funding level of $83,700,000 will allow the procurement of nine TDWR systems. Funding in the amount of $3,000,000 for program support has been deferred to FY 1992.

2a(4) Establish Airport Surveillance	$47,372,000	$12,300,000

This program has been off full funding since its inception in FY 1988. The FY 1991 funding of $47,372,000 will continue the establishment of these four Congressionally mandated surveillance radars and continue the relocation and improvement of existing radars at other locations. Funding in the amount of $12,300,000 for regional support and installation costs will be deferred and required in FY 1992.

2b(1) Los Angeles Basin TRACON	$76,100,000	$16,545,000

The $114,300,000 Los Angeles Basin TRACON Consolidation is a three year project, not considered to be on full funding. FY 1991 funding of $76,100,000 would provide for building construction and procurement of various electronic equipment. The remaining $16,545,000, deferred to FY 1992, is required for procurement of the voice switching and control system.

2b(4) Dallas/Fort Worth Metroplex	$40,000,000	$12,800,000

The FY 1991 funding of $40,000,000 will be used to construct the west control tower, procure landing aids for the west runway, install one airport surveillance radar, and establish communications facilities. Funding in the amount of $12,800,000 will be deferred and required in FY 1992 for regional support of the TRACON expansion and west tower establishment, and CAT I installation.

2c(2)Replace Terminal Air Traffic Control Facilities	$70,500,000	$21,300,000

Funding is in the amount of $70,500,000 is provided in FY 1991 for construction and installation costs for six locations initiated in FY 1990, tower and base building construction at Los Angeles, and advanced engineering for three future tower replacements. Construction funding totaling $21,300,000 for these three facilities will be deferred and needed in FY 1992.

2c(5) Interim Support Plan $99,000,000 $74,000,000

FY 1991 funding in the amount of $99,000,000 will be used to procure ARTS II and ARTS III positions and equipment, ASR-9's, ICSS backup equipment and airport weather sensors. Funding in the amount of $74,000,000 will be deferred and required in FY 1992 to continue ASR-9 and ICSS backup procurements and ARTS II radar position establishment and upgrade long range radars.

2c(7) New Denver Airport Establishment $60,000,000 $43,400,000

Most of the hardware procurement associated with the New Denver airport project are off full funding: RTR, TCS, MALSR, LLWAS, PAPI, RVR, ALSF-II, ASDE III, and ASR-9. An additional $43,400,000 will be required to complete these projects as well as the airport cable loop.

SENATOR LAUTENBERG: Does FAA intend on keeping some systems off of full funding in the next five years as part of the assumptions used to develop its current reauthorization proposal?

ANSWER: The Reauthorization Proposal has assumed the following major high cost programs would continue to be funded at the level of projected obligations for the appropriation year to reduce carryover:

1a(1) Long Range Radar (LRR)
1a(3) Weather Radar Program (NEXRAD)
1b(1) Advanced Automation System (AAS)
1c(7) Voice Switching and Control System
2a(1) Terminal Doppler Weather Radar (TDWR)
2a(4) Airport Surveillance Radar (ASR-9)
2b(1) LA Basin Facility Consolidation
2b(4) Dallas/FT. Worth Metroplex
2c(2) Replace Air Traffic Control Towers (ATCT)
2c(5) Interim Support Plan (ISP)
2c(7) New Denver Airport
3a(1) Flight Service Automation System (FSAS)

FACILITY CONSOLIDATIONS

SENATOR LAUTENBERG: Since the early 1980's, FAA has planned to merge 188 terminal radar approach control (TRACON) functions and personnel into 23 area control facilities (ACFs). Consolidation will be a major undertaking involving changes in operational procedures, logistics, and the relocation of large numbers of controllers and technicians.

In 1988 hearings on the FY 1989 budget, GAO testified that FAA's AAS economic analysis did not support the planned consolidation of TRACON facilities into en route facilities.

Last year you testified that FAA was analyzing a full range of terminal facility consolidation alternatives. You said you hoped to be able to report the results at this year's hearings. This is an important issue, because it affects costs, benefits, operational capabilities, and controller staffing requirements. Would you summarize the results of that analysis?

ANSWER: As I responded during House testimony on this subject, the analyses on which I will base a final ACF consolidation policy are not yet concluded. I expect to be able within the next several months to have the data upon which to base that final decision. At that time I will be happy to provide the results of these analyses to the committee.

SENATOR LAUTENBERG: Based on GAO's 1988 report, the evidence indicates that consolidating may be the wrong answer; first, it may cost more; second, it may not provide significant benefits; and third, it appears to have significant operational disadvantages. Given this situation, the analysis supporting your decision needs to be thorough and objective. Do you think your analysis will meet this standard?

ANSWER: The analysis will be extremely robust. It is being developed with an extensive database and indepth research. The final product, I am confident, will be both thorough and objective.

SENATOR LAUTENBERG: When will FAA initiate and complete necessary consolidation planning such as an analysis of staffing requirements, relocation implications and procedural changes?

ANSWER: Planning for these issues will be based on the final decision as to consolidation policy. We have done preliminary work to identify major relocation implications as part of our analysis of consolidation alternatives. Staffing requirements and procedural changes will be based specifically on the final system architecture.

SENATOR LAUTENBERG: When is the first scheduled consolidation of a TRACON function into an ACF?

ANSWER: January 1997. This is based on the first Operational Readiness Demonstration (ORD) of the Terminal Advanced Automation System (TAAS).

SENATOR LAUTENBERG: GAO's 1988 report on the subject indicated that a proper analysis needs to consider varying the automation capabilities to be provided at terminal facilities.

For example, GAO pointed out that FAA's AAS cost/benefit analysis included a technically and operationally feasible alternative which did not consolidate terminal facilities and did not provide electronic flight strips at these facilities. GAO reported that this alternative could save $750 million and avoid significant operational disadvantages associated with consolidation.

Does your analysis include an evaluation of this alternative? If so, what are the results, and if not, why haven't you analyzed this alternative?

ANSWER: GAO did state that deletions of functionality in certain AAS equipment would save $750 million. However, they also pointed out that benefits would also be reduced. These reduced benefits relate to reduced capability. Our analysis does evaluate various consolidation alternatives and equipage including the alternative of not providing electronic flight strips. However, each alternative assumes that an equal level of capability, functionality, and safety would be available to each user of the national airspace system.

SENATOR LAUTENBERG: GAO's report also pointed out the importance of not spending funds primarily intended for consolidation until the analysis of alternatives is completed. Does your 1991 request include any funds that are primarily intended to support consolidation plans? If so, how much, and why are you requesting these funds this year?

ANSWER: The 1991 request does not include funds for consolidation of facilities under the Area Control Facility Program.

SENATOR LAUTENBERG: Your 1991 budget justification requests $46,194,000 for ARTCC improvement and plant modernization. One example provided is the need to satisfy the projected power demands from the Advanced Automation System and the Voice Switching and Control System.

In light of additional delays that have surfaced since this budget justification was developed, how is the total amount requested still justified?

ANSWER: The delivery schedule delays for the Advanced Automation System (AAS) and Voice Switching and Control System (VSCS) are not severe enough to allow delays in our power system equipment procurement and building construction. Several Air Route Traffic Control Centers (ARTCC) would not have had sufficient power capacity for the new electronic equipment, if the delays had not occurred. This delay negates the need for temporary power that would have been required. The budget is required, so all power systems procurement and construction (at all ARTCC's) can be complete before AAS and VSCS deliveries.

LONG RANGE RADAR (ARSR-4)

SENATOR LAUTENBERG: Last year, FAA stated that it determined how many long range radars to fund in FY 1990 by the agency's ability to deploy these systems. However, since the first system will not be installed until October 1992, there is no track record on whether this can be realistically done.

In determining that an additional nine systems needed to be funded in FY 1991, did FAA consider the implementation work load projected for all systems in that geographical area? Particularly, what assumptions were used in terms of in-house and contractor implementation resources?

ANSWER: The nine systems planned in FY 1991 are not additional systems, but are part of the original multi-year fixed price contract. Regional planning for installing these sites has been on-going since 1983 and has assumed that the site preparation work will be performed by their subcontractors. The radar installation will be performed under the prime contract by Westinghouse.

SENATOR LAUTENBERG: Last year, you projected that $92.2 million would be requested in FY 1991. Your current request is $75.2 million. What were the reasons behind this decrease?

ANSWER: In fiscal year 1990 the program went off full-funding and phased-funding approach was implemented for certain items. We decided that $75.2 million was sufficient in FY 1991 to provide for FAA's share of the project and deferral of remaining funding to a future year would not delay the program.

SENATOR LAUTENBERG: Provide a breakdown of costs associated with the hardware, spare parts, and site survey/selection costs associated with the long range radar program since the beginning of the program through the FY 1991 request.

ANSWER: Below is a breakdown of costs associated with the long range radar program since the beginning of the program through the FY 1991 request. The summary includes FAA, USAF, and Navy funds.

LRR FINANCIAL SUMMARY
(in millions of dollars)

	Prior	1988	1989	1990	1991
Contract (Includes design/development/radar production)					
Basic		$18.3	$56.7	$72.7	$62.1
Options			$ 1.8	$16.5	
Spares/Test					$40.0
Site survey/ Site selection	$0.2	$0.6	$ 1.1	$10.0	$30.0
Beacon Antenna			$ 4.1		
Other	$8.2	$ 3.3	$17.0	$ 8.0	$20.0

SENATOR LAUTENBERG: Provide the LRR site date with estimated operational date and year funded.

Location	Operational Date	Year Funded
FAA Aeronautical Center...	December 1993	Fiscal Year 1988
Mill Valley, CA...........	December 1993.......	Fiscal Year 1989
Makah, WA................	December 1993.......	Fiscal Year 1989
Oceana, VA................	January 1993........	Fiscal Year 1989
Lake Charles, LA..........	February 1994.......	Fiscal Year 1989
Paso Robles, CA...........	April 1994..........	Fiscal Year 1989
Crescent City, CA.........	April 1994..........	Fiscal Year 1989
Jedburg, SC...............	May 1994...........	Fiscal Year 1989
Mt. Santa Rosa, Guam......	June 1994...........	Fiscal Year 1990
Tyndall, FL...............	June 1994...........	Fiscal Year 1990
Salem, Or.................	July 1994...........	Fiscal Year 1990
Gibbsboro, NJ.............	August 1994.........	Fiscal Year 1990
Ellington, TX.............	August 1994.........	Fiscal Year 1990
Watford City, ND..........	September 1994......	Fiscal Year 1990
Slidell, LA...............	September 1994......	Fiscal Year 1990
Cross City, FL............	September 1994......	Fiscal Year 1990
Fort Fisher, NC...........	October 1994........	Fiscal Year 1990
Bucks Harbor, ME..........	November 1994.......	Fiscal Year 1991
El Paso, TX...............	November 1994.......	Fiscal Year 1991
Phoenix, AZ...............	December 1994.......	Fiscal Year 1991
Richmond, FL..............	January 1994........	Fiscal Year 1991
Nashwauk, MN..............	January 1994........	Fiscal Year 1991
Lakeside, MT..............	February 1995.......	Fiscal Year 1991
Mt. Kaala, HI.............	March 1995..........	Fiscal Year 1991
Sonora, TX................	March 1995..........	Fiscal Year 1991
Kenai, AK.................	August 1995.........	Fiscal Year 1991
Whitehouse, FL............	April 1995..........	Beyond Fiscal Year 1991
Riverhead, NY.............	April 1995..........	

Silver City, NM	April 1995
Empire, MI	May 1995
Finley, ND	June 1995
Utica, NY	June 1995
Mica Peak, WA	July 1995
Mt. Laguna, CA	August 1995
Malmstrom, MT	August 1995
Patrick, FL	September 1995
Odessa, FL	October 1995
Fort Lonesome, FL	October 1995
North Truro, MA	November 1995
Oilton, TX	January 1996

MODERNIZATION

SENATOR LAUTENBERG: Provide a breakout of the fiscal year 1991, $24.3 million request for modernization by location and work to be performed.

ANSWER:

Region/Facility	Amount ($in millions)
ANS-240 Earthquake Assessment	2.000
Southern -	
Atlanta, GA	3.440
New England -	
Bangor, MA	.138
Boston, MA	1.000
Northwest Mountain -	
Seattle, WA	1.350
Boise, ID	.445
Missoula, MT	.325
Portland, OR	.500
Spokane, WA	.175
Great Lakes -	
Minneapolis, MN	.788
Chicago, IL	1.500
Akron/Canton, OH	.297
Flint, MI	.297
Moline, IL	.297
St. Paul, MN	.056
Western Pacific -	
Riverside, CA	.093
Grand Canyon, AZ	.226
Battle Mountain, NV	.286
San Francisco, CA	.693
Los Angeles, CA	1.300
Eastern -	
New York, NY	2.442
N. Philadelphia, PA	.044
Poughkeepsie, NY	.044
Hagerstown, MD	.022
Ithaca, NY	.022
Lewisburg, WV	.022

Charleston, WV	.050
Morgantown, WV	.022
Clarksburg, WV	.022
Binghampton, NY	.188
Harrisburg, PA	.154
Central -	
Kansas City, MO	1.505
Southwest -	
Ft. Worth, TX	1.353
El Paso, TX	1.607
Alaska -	
Anchorage, AK	1.122
Buckland, AK	.057
Huslia, AK	.058
Juneau, AK	.360

The work to be performed includes, but is not limited to the following:

Earthquake Assessment and Corrective Action
Repair/replace Roof
Replace Siding
Replace Flooring
Provide TELCO Room
Rewiring
Replace Nonrepairable Buildings
Improve Access Roads, Fences, Parking Areas
Replace HVAC
Install Improved HVAC Controls
Insulate Partitions/Walls/ Ceilings

DOD's SHARE OF MODERNIZATION COSTS

SENATOR LAUTENBERG: Part of FAA's justification includes a description of the absence of interfacility data transfer between the Air Force's Edwards AFB RAPCON and the adjacent FAA en route center. The capability would allow more flights to be controlled by the Edwards facility.

Furthermore, FAA is requesting $18.6 million to obtain and equip a used 3500 nautical mile aircraft to support international flight inspection requirements.

In light of decreasing military needs in many weapons systems, it would be appropriate to consider requesting Defense's reimbursement for the requested upgrade in the RAPCON's capability. Has this issue been discussed with Defense, at what level and what were the reasons for FAA funding?

ANSWER: This subject has been discussed by the FAA and the DOD since before the current decreasing military needs issue. There is a proposal that DOD provide and maintain an interim replacement system for the operation at Edwards RAPCON at no cost to the FAA. Our concerns with the military providing a totally unique system intended to interface with the National Airspace System are in the areas of software support, lifecycle system maintenance and training support for a unique system. This issue is being worked by the FAA, the Department of the Air Force

Headquarters Systems Command, and the Department of Defense National Airspace System Plan Requirements Office.

SENATOR LAUTENBERG: Has FAA investigated the possibility of DOD's transferring, at no cost, one of their aircraft to meet FAA's needs?

ANSWER: The FAA has been discussing the possible transfer of C-29A aircraft from the Air Force. The transfer of aircraft from the Air Force would be accompanied with the transfer of the Air Force flight inspection activity.

We have had several meetings with Air Force representatives and are currently meeting to discuss a draft Memorandum of Agreement between the Air Force and the Federal Aviation Administration.

TERMINAL RADAR APPROACH CONTROL (TRACON)

SENATOR LAUTENBERG: At some large TRACONS, the air traffic control systems have experienced computer overloads, causing aircraft information to vanish from controller's screens, flickering displays, and/or delayed computer responses to controllers' attempts to update or request data. These overload problems threaten the ability of controllers to maintain safe separation of aircraft. To resolve this immediate dilemma, the FAA is planning an interim upgrade of the computers until the AAS becomes available.

How much additional computer capacity is required to implement the Mode C Intruder safety enhancement?

ANSWER: ARTS IIIA facilities with only one radar input to the system will require a total of six processors, which is four more than the present configuration. ARTS IIA facilities with two radar inputs into the system will require a total of eight processors, which is four more than the current configuration.

SENATOR LAUTENBERG: Will the interim upgrade of the present controller system be able to meet the air traffic control needs in the event of slippages in the AAS schedule?

ANSWER: The Interim Support Plan (ISP) which is intended to sustain the present system will not be able to meet air traffic control needs. This is because of the unprecedented growth of air traffic services brought on by airline deregulation, economic growth, and the changing demographics of the nation.

Compounding these factors is our ability to support a dynamic ATC system with associated resource shortages, complex unresponsive procurement processes, and long lead times from vendors.

The ATC system needs continued interim upgrading of its systems until AAS to insure that a safe, responsive, and reliable air transportation system is in place to meet the nation's needs.

SENATOR LAUTENBERG: When will the busiest TRACONs, such as Chicago, Dallas, and Los Angeles, be replaced by the Advanced Automation System?

ANSWER: The current plan calls for these facilities to remain as independent radar facilities after ACF establishment. A plan is under development to identify the timing when AAS will be incorporated into these locations.

SENATOR LAUTENBERG: In response to the computer capacity problems, GAO recommended that FAA implement a computer capacity and performance management program. What steps has FAA taken to implement a computer capacity and performance management program?

ANSWER: FAA has implemented performance monitoring at several locations, including Dallas/Ft. Worth and New York TRACON.

SENATOR LAUTENBERG: Is part of your interim solution the purchase of old UNIVAC 8303s, 1960's vintage equipment?

ANSWER: Yes. We are procuring newly built old technology processors. New Technology Solid State Memories (SSM) have already been procured and will be installed prior to the installation of the additional processors.

SENATOR LAUTENBERG: How is this justified?

ANSWER: No other system, hardware or software, is available today that can handle the complexity of the terminal environment without a major development effort, which would then be replaced with AAS. The approach encompasses little or no risk since the hardware we are procuring is already in use operationally at every major airport/TRACON in the country, controlling some 50-60 million operations annually. This is an interim solution until AAS is implemented.

SENATOR LAUTENBERG: The upgraded ARTS IIA system has recently become operational at a few TRACONs. We understand that FAA does not have a computer capacity program for small TRACONs and therefore does not know the capacity utilization of its systems. Nonetheless, FAA plans to procure additional capacity to allow the addition of Mode C Intruder.

Last year you stated that under maximum specified traffic loads of 256 beacon targets and 102 beacon tracks in a worst case configuration, the ARTS IIA has approximately seven percent usable reserve computer capacity. How often do upgraded smaller TRACON sites experience this situation?

ANSWER: There has never been a documented occurrence of a traffic load of 256 beacon targets and 102 beacon tracks at an upgraded ARTS IIA TRACON. A test was conducted at major sites prior to the upgrade which involved insertion of a program patch to determine instantaneous target. This test disclosed at the time a maximum of 135 beacon targets and 46 full data blocks (equates to 46 beacon tracks in ARTS IIA).

SENATOR LAUTENBERG: When do you plan to implement a computer capacity program for smaller TRACON systems to enable you to determine capacity utilization and the amount of additional capacity needed at each site?

ANSWER: The current upgraded ARTS IIA smaller TRACON software includes capacity message reporting capabilities when 85 percent of the specified 102 beacon tracks are being processed.

FAA is currently developing a requirement for a "performance monitor" function in the ARTS IIA software that will allow instantaneous, real time analysis of processor, target, and track utilization as well as the remaining capacity reserve. Upon approval, the function will be developed and implemented with two new additional functions in a single enhancement package during the first quarter of calendar year 1991.

SENATOR LAUTENBERG: How has FAA assessed the impact of anticipated traffic growth in determining future capacity requirements?

ANSWER: The FAA commissioned a study entitled "Sustain The ARTS", the final report of which was dated October 26, 1987. Executive Research Associates, Inc. went to various ARTS II and ARTS III facilities around the country to determine current peak and average traffic counts and then projected traffic growth through the year 2000. Projected year 2000 utilization of the current capacity of 102 tracks was 59 percent at the largest ARTS IIA site.

Mode C Intruder is essentially a track-all system. The current single sensor capability of the ARTS IIA is 256 targets. Capacity enhancements to provide 256 tracks would provide for Mode C Intruder as well as provide for new functionality growth and any unpredictable traffic count growth due to airline hubbing decisions or errors in the projection methodology.

The FAA recognizes the need for improvement in a computer system capacity management program. A requirement for an on-line system performance monitor in the ARTS IIA is currently in the approval process for development and implementation in the current ARTS IIA software program. This on-line enhancement will allow for the development of a database for each ARTS IIA site that will give peak and average traffic counts as well as percent of processor utilization. This data will allow the FAA to better manage its computer resources and to more accurately specify future capacity needs.

SENATOR LAUTENBERG: The Area Control Facility consolidation will reduce the number of TRACONS in the U.S. to 23 facilities. Please supply the Committee with the consolidation list and timing schedule.

ANSWER: The attached list provides consolidation dates for all TRACON facilities with the exception of Los Angeles, Coast, Ontario, Burbank, San Diego, Dallas-Fort Worth, and Chicago. As mentioned before, this program is under review. I will be able to provide an updated consolidation list with exceptions at the completion of this review.

ATTACHMENT
ACF END-STATE CONSOLIDATION BREAKDOWN

FACILITY	ID	TYPE	IMPLEMENTATION DATE
Albuquerque Center	ZAB	ARTCC	
Roswell Industrial Air Ctr.	ROW	NR	
Amarillo	AMA	TRACON	08/98
El Paso International	ELP	TRACON	12/98
Albuquerque	ABQ	TRACON	04/99
Tuscon	TUS	TRACON	09/99
Phoenix	P50	TRACON	01/00
Anchorage Center	ZAN	ARTCC	
Anchorage Intl	ANC	TRACON	06/00
Fairbanks	FAI	TRACON	10/00

FACILITY	ID	TYPE	IMPLEMENTATION DATE
Kenai	ENA	TRACAB	02/01
King Salmon	AKN	RAPCON	06/01
Galena	GAL	RAPCON	10/01

Atlanta Center	ZTL	ARTCC	
Augusta	AGS	TRACON	08/97
Bristol Tri-City	TRI	TRACON	12/97
Asheville	AVL	TRACON	04/98
Greer	GSP	TRACON	09/98
Chattanooga	CHA	TRACON	01/99
Knoxville McGhee Tyson	TYS	TRACON	05/99
Montgomery Dannely Field	MGM	TRACON	09/99
Greensboro Regional	GBO	TRACON	01/00
Birmingham	BHM	TRACON	05/00
Columbus	CSG	TRACON	09/00
Macon Lewis B. Wilson	MCN	TRACON	01/01
Charlotte Douglas	CLT	TRACON	05/01
Atlanta Intl	ATL	TRACON	09/01

Boston Center	ZBW	ARTCC	
Manchester	MHT	TRACON	10/98
Portland	PWM	TRACON	01/99
Bangor International	BGR	TRACON	03/99
Brunswick NAS	NHZ	RAPCON	05/99
Pease AFB	PSM	RAPCON	09/99
Boston Logan	BOS	TRACON	12/99
Burlington International	BTV	TRACON	12/99
Loring AFB	LIZ	RAPCON	08/00
Syracuse Hancock Intl	SYR	TRACON	12/00
Griffiss RAPCON	RME	RAPCON	04/01
Albany County	ALB	TRACON	08/02
Otis RAPCON	FMH	TRACON	12/02
Ouonset Point NAS	OQJ	TRACON	04/03
Bradley	BDL	TRACON	05/03

Chicago Center	ZAU	ARTCC	
Muskegon	MKG	TRACON	10/97
Kalamazoo	AZO	TRACON	02/98
Grand Rapids	GRR	TRACON	06/98
Moline	MLI	TRACON	11/98
Cedar Rapids	CID	TRACON	03/99
Waterloo	ALO	TRACON	07/99
Fort Wayne	FWA	TRACON	11/99
Champaign	CMI	TRACON	03/00
Madison	MSN	TRACON	07/00
Peoria	PIA	TRACON	11/00
Rockford	RFD	TRACON	03/01
South Bend	SBN	TRACON	07/01
Milwaukee Mitchell	MKE	TRACON	11/01

Cleveland Center	ZOB	ARTCC	
Mansfield Lahm Muni	MFD	TRACON	12/97

FACILITY	ID	TYPE	IMPLEMENTATION DATE
Erie	ERI	TRACON	04/98
Rochester, NY	ROC	TRACON	08/98
Buffalo	BUF	TRACON	01/99
Selfridge AFB	MTC	RAPCON	05/99
Saginaw Tri City	MBS	TRACON	09/99
Youngstown	YNG	TRACON	01/00
Flint Bishop Intl	FNT	TRACON	05/00
Lansing	LAN	TRACON	09/00
Toledo Express	TOL	TRACON	01/01
Clarksburg, WV	CKB	TRACON	05/01
Akron Canton Regional	CAK	TRACON	09/01
Cleveland Hopkins Intl	CLE	TRACON	01/02
Pittsburg Greater Intl	PIT	TRACON	05/02
Detroit Metro/Wayne	D21	TRACON	09/02
Denver Center	ZDV	ARTCC	
Cheyenne	CYS	NR	
Casper	CPR	TRACON	02/98
Aspen	ASE	TRACAB	06/98
Grand Junction	GJT	NR	
Pueblo	PUB	TRACON	10/98
Colorado Springs	COS	TRACON	03/99
Denver TRACON	D84	TRACON	07/99
Fort Worth Center	ZFW	ARTCC	
Clinton-Sherman	CSM	NR	
Tyler-Ponds Field	TYR	NR	
San Angelo	SJT	NR	
Waco Municipal	ACT	TRACON	11/97
Longview	GGG	TRACON	03/98
Monroe	MLU	TRACON	07/98
Shreveport	SHV	TRACON	12/98
Midland	MAF	TRACON	04/99
Abilene	ABI	TRACON	08/99
Lubbock (Reese)	LBB	TRACON	12/99
Oklahoma City Will Rogers	OKC	TRACON	04/00
Honolulu Center	ZHN	ARTCC	
Kahului	OGG	TRACAB	05/00
Hilo	ITO	TRACAB	09/00
Honolulu	HNL	TRACON	01/01
Houston Center	ZHU	ARTCC	
Beaumont Port Arthur	BPT	TRACON	01/98
Lake Charles Muni	LCH	TRACAB	05/98
Lafayette	LFT	TRACON	09/98
Baton Roughe Ryan Field	BTR	TRACON	02/99
New Orleans Moisant	MSY	TRACON	06/99
Austin	AUS	TRACON	10/99
San Antonio Intl	SAT	TRACON	02/00
Houston Intercontinental	IAH	TRACON	06/00

FACILITY	ID	TYPE	IMPLEMENTATION DATE
Indianapolis Center	ZID	ARTCC	
Terre Haule	HUF	TRACON	01/99
Grissom AFB	GUS	RAPCON	05/99
Huntington	HTS	TRACON	09/99
Charleston	CRW	TRACON	02/00
Evansville	EVV	TRACON	06/00
Lexington	LEX	TRACON	10/00
Cincinnati Greater	CVG	TRACON	02/01
Louisville Standford	SDF	TRACON	06/01
Dayton	DAY	TRACON	10/01
Indianapolis Intl	IND	TRACON	02/02
Columbus Intl	CMH	TRACON	06/02
Jacksonville Center	ZJX	ARTCC	
Florence City	FLO	TRACON	02/99
Tallahassee	TLH	TRACON	06/99
Savannah Municipal	SAV	TRACON	10/99
Columbia Metropolitan	CAE	TRACON	03/00
Charleston AFB Municipal	CHS	TRACON	07/00
Daytona Beach	DAB	TRACON	11/00
Jacksonville Intl	JAX	TRACON	03/01
Kansas City Center	ZKC	ARTCC	
Springfield, MO	SGF	TRACAB	06/98
Tulsa INtl	TUL	TRACON	10/98
Wichita Mid Continent	ICT	TRACON	02/99
Whiteman AFB	SZL	RAPCON	07/99
Kansas City Intl	MCI	TRACON	11/99
Springfield, IL	SPI	TRACON	03/00
St. Louis TRACON	STL	TRACON	07/00
Los Angeles Center	ZLA	ARTCC	
Santa Barbara	SBA	TRACON	02/00
Bakersfield Meadows Field	BFL	TRACON	06/00
Point Mugu NAS	NTD	RATCEE	10/00
Palm Springs Municipal	PSP	TRACAB	02/01
Las Vegas McCarran Intl	LAS	TRACON	06/01
Memphis Center	ZME	ARTCC	
Jackson Municipal Airport	JAN	TRACON	10/98
Fort Smith	FSM	TRACAB	02/99
Drake/Fayetteville	FYV	TRACON	06/99
Huntsville	HSV	TRACON	11/99
Blytheville AFB (Eaker)	BYH	RAPCON	03/00
Meridan RATCC	NMM	RATCEE	07/00
Little Rock Adams Field	LIT	TRACON	11/00
Nashville Metropolitan	BNA	TRACON	03/01
Memphis Intl	MEM	TRACON	07/01

FACILITY	ID	TYPE	IMPLEMENTATION DATE
Miami Center	ZMA	ARTCC	
San Juan CERAP	ZSU	CERAP	12/98
Fort Myers Regional	RSW	TRACON	04/99
Patrick AFB	COF	RACPON	08/99
Tampa Intl	TPA	TRACON	01/00
Orlando Level IV	MCO	TRACON	05/00
West Palm Beach	PBI	TRACON	09/00
Miami Intl	MIA	TRACON	01/01
Minneapolis Center	ZMP	ARTCC	
Duluth	DLH	TRACON	07/98
Grand Forks AFB	RDR	RAPCON	11/98
Bismarck	BIS	TRACON	03/99
Minot AFB	MIB	RAPCON	08/99
Sioux City Municipal	SUX	TRACON	12/99
Rochester	RST	TRACON	04/00
Wurtsmith AFB	OSC	RAPCON	08/00
Fargo Hector Field	FAR	TRACON	12/00
Sioux Falls Foss Field	FSD	TRACON	04/01
K.I. Sawyer AFB	SAW	RAPCON	08/01
Lincoln Municipal	LNK	TRACON	12/01
Austin Straubel Field	GRB	TRACON	04/02
Des Moines Municipal	DSM	TRACON	08/02
Omaha Offutt AFB	R90	RAPCON	12/02
Minneapolis St. Paul TRACON	M98	TRACON	04/03
New York Center	ZNY	ARTCC	
McGuire AFB	WRI	RAPCON	05/98
Binghampton Broome County	BGM	TRACON	09/98
Capital City/Harrisburg	CXY	TRACON	01/99
Elmira TRACAB	ELM	TRACON	06/99
Reading	RDG	TRACON	10/99
Philadelphia	PHL	TRACON	02/00
New York TRACON	N90	TRACON	
Wilkes Barre	AVP	TRACON	06/00
Allentown	ABE	TRACON	10/00
Oakland Center	ZOA	ARTCC	
Stockton	SCK	TRACON	09/98
Fresno Air Terminal	FAT	TRACON	01/99
Reno Intl	RNO	TRACON	05/99
Travis AFB	SUU	RAPCON	10/99
Sacramento TRACON	MCC	TRACON	02/00
Bay TRACON	O90	TRACON	06/00
Monterey	MRY	TRACON	10/00
Salt Lake City Center	ZLC	ARTCC	
Salt Lake City TRACON	S56	TRACON	04/98

FACILITY	ID	TYPE	IMPLEMENTATION DATE
Boise	BOI	TRACON	08/98
Billings	BIL	TRACON	12/98
Great Falls	GTF	TRACON	05/99
Missoula, MN	MSO	TRACON	09/99
Helena	HLN	TRACAB	01/00
Seattle Center	ZSE	ARTCC	
Spokane Intl	GEG	TRACON	06/97
Medford-Jackson Cty	MFR	TRACON	10/97
Yakima Air Terminal	YKM	TRACAB	02/98
Moses Lake Grant	MWH	TRACON	07/98
Pasco	PSC	TRACON	11/98
Eugene	EUG	TRACON	03/99
Portland TRACON	P80	TRACON	07/99
Seattle Tacoma TRACON	S46	TRACON	11/99
Washington Center	ZDC	ARTCC	
Dover AFB	DOV	RAPCON	03/98
Roanoke	ROA	TRACON	07/98
Atlantic City	ACY	TRACON	11/98
New Hanover Cty	ILM	TRACAB	04/99
Fayetteville Grannis	FAY	TRACON	08/99
Raleigh-Durham	RDU	TRACON	12/99
Richmond Byrd Intl	RIC	TRACON	04/00
Washington Dulles Intl	IAD	TRACON	08/00
Norfolk Regional	ORF	TRACON	12/00
Washington National	DCA	TRACON	04/01
Baltimore Washington Intl	BWI	TRACON	08/01

LOS ANGELES BASIN TRACON

SENATOR LAUTENBERG: What are the total estimated costs associated with the L.A. Basin TRACON consolidation?

ANSWER:

($000)

FY-90 & PRIOR:	$21,654.9
FY-91	76,100.0
FY-92	16,545.1
TOTAL	$114.300.0

SENATOR LAUTENBERG: After an $18.9 million appropriation in 1990, how can this project accommodate a 400 percent increase in one year?

ANSWER: Approximately 66 percent of the FY 1991 funding request is required to support the award of a building contract. The remaining portion is for existing electronic equipment acquisition contracts to meet the initial commissioning date of December 1993.

SENATOR LAUTENBERG: What are the estimated costs in 1991, and what activities would that funding cover?

ANSWER: See chart below.

Title	FUNDING	OBLIGATION PLAN
Dual Automated Radar Terminal System III	.62	4/91
Full Digital Arts Displays System	4.517	4/91
Mapper	.05	4/91
Digital Sweep Generator	.05	4/91
TPX-42	.192	4/91
Flight Data Input-Output	.05	6/91
Digital Bright Radar Tower Indicator	.30	4/91
Surviellance Communication Interface Processor System	.12	4/91
Remote SCIPS	4.20	5/91
Traffic Management Unit	.50	7/91
High Capacity Voice Recorder	.463	7/91
Remote Communication Eequipment	2.410	7/91
Data Multiplexer	.296	6/91
Software	.50	5/91
Voice Switching & Communication System	5.010	5/91
Power System (Eng/Pcs)	4.253	6/91
Position Consoles	.282	1/91
Clocks	.039	2/91
Solid State Beacon Decoders	.004	2/91
Automated Surface Observing System	.300	1/91
Digital Altimeter Setting Indicator	.209	3/91
Runway Visual Range Indicator	.133	3/91
Maintenace Control Center	.192	7/91
Master Demarcation	.257	9/91
Data Display System	.099	9/91
Land	9.0	1/91
Building	34.350	12/90
Admin Phones	.300	8/91
Dual Radar Switch	.074	7/91
Architect & Engineering Contract	.500	1/91
Program Support	6.830	3/91
TOTAL	76.1	

SENATOR LAUTENBERG: Provide the dates of the major milestones associated with this project.

ANSWER:

	START	COMPLETION
Site Selection	4/89	10/89
Human Resources Management Plan	4/89	5/90
Facility Design	9/89	5/90
TRACON Site Adaptation	5/90	7/90
Construction Contract Procurement	5/90	12/90
Construction	5/91	3/93
Installation	10/92	11/94
Commissioning	12/93	12/94

MODE C INTRUDER

SENATOR LAUTENBERG: Last year, you stated that the current ARTS IIA systems lack the capacity to accommodate MODE C Intruder software. What is FAA doing for the 120 smaller ARTS II locations?

ANSWER: The FAA has included the requirement for Mode C Intruder (MCI) functionality and the supporting system capacity expansion as an option in the ARTS IIA Interim Support Plan contract scheduled for an August 1990 award.

The ARTS IIA MCI/Expand Capacity project is currently under consideration for approval and inclusion in the FAA 1990 Capital Investment Plan and would be supported by FY 1993 and FY 1994 budget items.

SENATOR LAUTENBERG: What are your latest estimates for upgrading the smaller TRACONS (including costs and dates)?

ANSWER: The ARTS IIA Mode C Intruder/Expand Capacity project is currently under consideration for approval and inclusion in the FAA 1990 Capital Investment Plan and would be supported by FY 1993 and FY 1994 budget items.

The following cost and schedule estimate is based on an approved FY 1993 ($13.5 million) and FY 1994 ($31.5 million) budget items:

10/92 - Contract award
08/96 - First implementation
06/98 - Last implementation

DALLAS-FORT WORTH METROPLEX

SENATOR LAUTENBERG: Your latest estimate shows an unobligated balance of approximately $50.5 million for the Dallas-Fort Worth Metroplex, out of the $52.2 million provided in fiscal year 1990. Why such a large unobligated balance?

ANSWER: The FY 1990 funding is planned to be obligated during the last half of calendar year 1990.

SENATOR LAUTENBERG: How will the 1990 and the requested fiscal year 1991 funds obligate?

ANSWER:

FY-1990 Obligation Profile: (in millions of dollars)

FY-1990 Funds To Be Obligated in	FY 1990	FY 1991	FY 1992
Title			
Engineering/Planning	$ 1.2		
Automation	9.0	$ 3.5	
Est ASR-9	3.9	.2	
Relocate ASR-9	1.0		
Est ATCT (EAST)	1.4	9.2	
Expand ATCT/TRACON	1.1	2.1	$ 2.3
Est VORTAC (2)	2.7	1.6	
Relocate VORTAC (4)	.2	.6	
Est CAT I ILS (4)/MALSR (4)/RVR (4)	1.0	2.5	
Est DME (2)		.3	
Cable Loop	.5	.6	
Communications		1.4	
Program Support	5.9		
Total	$27.9	$22.0	$ 2.3

FY-1991 Funding Profile: (in millions of dollars)

To Be Obligated in	FY 1991
Title	
Est ASR-9 With MODE-S	$ 7.9
Remote ASDE-3	3.3
Est ATCT (WEST)	10.9
Expand ATCT/TRACON	3.2
Est VORTAC (WEST)	.8
Est RTR /MALSR /NDB	4.4
Communications	4.6
Program Support	4.9
Total	$40.0

SENATOR LAUTENBERG: Provide descriptions and dates for the major milestones associated with this project.

ANSWER: The major milestones are:

Milestone	Completion Date
1. Environmental Impact Study	9/90
2. Human Resource Management Plan	10/90
3. ASR-9 East	2/92
4. East Control Tower	6/93
5. West Control Tower	8/93
6. TRACON Expansion	7/93
7. VORTAC's (6)	7/93
8. ILS/RVR/MALSR EAST	3/91
9. ILS/RVR/MALSR WEST	3/93

TOWER REPLACEMENT

SENATOR LAUTENBERG: Provide for the record the level of appropriations and the level of obligations for tower replacement for fiscal years 1987, 1988, and 1989. Identify the sites where the funds were spent.

ANSWER: The information follows.

TOWER REPLACEMENT

FY	LOCATION	APPROPRIATION	OBLIGATED AS OF 4/30/90
1987	BUFFALO, NY *	$ 5,894,900	$ 689,707
	NORFOLK, VA *	7,377,700	4,789,227
	ALBUQUERQUE, NM *	6,657,800	714,845
	MONROE, LA *	3,223,000	777,419
1988	SIOUX CITY, IA	$ 3,934,900	$ 3,351,589
	BUFFALO, NY **	477,100	-0-
	LAGUARDIA, NY ***	114,600	16,327
	NORFOLK, VA **	597,200	-0-
	MOSES LAKE, WA	808,200	552,908
	ATLANTA , GA (Fulton County)	4,297,100	3,473,863
	ST PETERSBURG, FL	4,243,200	147,148
	ALBUQUERQUE, NM **	538,900	-0-
	HOUSTON TX	10,233,900	121,146
	MONROE, LA **	286,800	-0-
	NEW ORLEANS, LA	6,966,200	484,042
	CHINO, CA	3,928,700	90,344
1989	ALLENTOWN, PA	$ 6,363,100	$ 132,317
	DETROIT (METRO), MI	12,714,600	9,864,077
	WINDSOR LOCKS, CT	7,643,200	141,274
	ORLANDO, FL	3,766,300	8,864
	FT SMITH, AR	2,339,900	92,686
	SAN JOSE, CA	4,673,000	99,261

* FIRST OF TWO YEAR FUNDING

** SECOND OF TWO YEAR FUNDING

*** FIRST YEAR FUNDING - SECOND YEAR FUNDING OF $9,673,000 REQUESTED IN FY 1990

SENATOR LAUTENBERG: List the latest projects for tower replacement costs for fiscal years 1990 through 1995, and the sites where these funds will be spent.

ANSWER: The following tower replacement projects and cost estimates are provided for fiscal years 1990 through 1992:

FY	LOCATION	Appropriation or Proposal
1990	St. Louis, MO *	$ 2,300,000
	LaGuardia, NY **	9,673,000
	Newark, NJ *	2,200,000
	Chicago, (O'Hare) IL *	2,200,000
	Helena, MT *	351,000
	Montgomery, AL *	600,000
	Roswell, NM *	585,000
1991	Kansas City, MO *	$ 2,000,000
	Newark, NJ *	9,103,200
	Chicago,(Midway) IL *	1,500,000
	Chicago, O'Hare) IL **	15,493,100
	St. Louis, MO **	9,954,200
	Helena, MT **	1,738,700
	Montgomery, AL **	4,344,100
	Roswell, NM **	3,866,700
	Los Angeles, CA	21,000,000
	San Diego, CA	1,500,000
1992	San Diego, CA **	$ 4,500,000
	Chicago, (Midway) IL **	8,900,000
	Kansas City, MO **	8,800,000
	Santa Barbara, CA *	3,066,000
	Topeka, KS *	524,000
	Beaumont, TX *	196,000
	Pontiac, MI *	1,448,000
	Minneapolis, MN *	3,151,000
	San Juan, PR *	2,295,000
	Covington, KY *	1,713,000
	Klamath Falls, OR *	908,000
	Bedford, MA *	2,660,000
	Syracuse, NY *	3,012,000

* First year of two year funding
** Second year funding of two year funding

NOTE: FY 1992 Sites are for planning purposes and have not been approved by the Administrator or reviewed by OST or OMB.

Based on regional estimates, we anticipate the regions will submit a total of approximately 75 tower facilities as candidate locations for replacement in their annual budget requests from fiscal year 1993 through 1995.

We are unable to provide a detailed list of candidate sites and cost estimates for these facilities. Each year the regions identify the candidate locations for control tower replacement as part of the annual budget process. These future sites will be selected based on activity and regional requirements which are validated on a year-to-year basis.

SENATOR LAUTENBERG: What criteria does FAA use in selecting towers for replacement?

ANSWER: We have a detailed Regional and Headquarters evaluation and review process that identifies control tower facilities as candidates for modernization and replacement.

The regions identify the candidate locations in response to specific guidelines set forth in the annual Facilities and Equipment Call for Estimates. These guidelines provide extensive justification requirements including compliance with agency orders, facility retention criteria, site selection, and full explanations of the reasons for a replacement or modernization of a facility.

Candidate sites are prioritized by the regions based on operational requirements and physical deficiencies in accordance with Order 6480.17, "Terminal Facility Modernization/Relocations Survey Handbook".

The locations are reviewed and evaluated at the headquarters level and recommended sites are included in the Annual F&E budget request along with other air traffic priority projects.

TOWER COMMUNICATIONS

SENATOR LAUTENBERG: What 38 locations are to receive the requested voice switches covered by the 1991 request?

ANSWER: After the budget item was submitted showing 38 operational units to be procured in FY 1991, we have re-evaluated the program acquisition strategy to a fly-before-you-buy process. We now plan to procure in FY 1991 one first article equipment (and the development of all documentation and logistics support elements required to field operational systems) prior to full production which is now planned to be funded starting in FY 1992. The review has also indicated that the total program cost of $162.4 million indicated in our budget request can be reduced by approximately $30 million.

SENATOR LAUTENBERG: When will these switches be installed?

ANSWER: The switches will be installed beginning in early calendar year 1994.

SENATOR LAUTENBERG: Please detail how this correlates with expansions, relocations and establishment of tower facilities.

ANSWER: Tower/TRACON modernization, expansion, relocation and establishment projects require a voice switch as one of the line items for project completion. Switches similar to the existing ICSS will be utilized to fulfill the requirements for voice switches for tower projects until the first TCS switch is delivered in 1994. At that time, all future requirements will be met by TCS.

FLIGHT SERVICE STATION MODERNIZATION

SENATOR LAUTENBERG: List the 36 flight service stations covered by your 1991 request.

ANSWER: There are 39 flight service stations proposed for decommissioning in FY 1991 as follows:

FSS	AFSS	FY QTR
Bettles, AK	Fairbanks, AK	4th
Northway, AK	Fairbanks, AK	2nd
Tanana, AK	Fairbanks, AK	4th
Big Delta, AK	Fairbanks, AK	3rd
Yakutat, AK	Juneau, AK	2nd
Homer, AK	Kenai, AK	3rd
McGrath, AK	Kenai, AK	2nd
Farewell, AK	Kenai, AK	2nd
Tuscaloosa, AL	Anniston, AL	4th
Harrison, AR	Jonesboro, AR	4th
Little Rock, AR,	Jonesboro, AR	3rd
Pine Bluff, AR	Jonesboro, AR	3rd
Crescent City, CA	Oakland, CA	4th
Lancaster, CA	Riverside, CA	2nd
Atlanta, GA	Macon, GA	3rd
Bowling Green, KY	Louisville, KY	2nd
Paducah, KY	Louisville, KY	3rd
Billings, MT	Great Falls, MT	1st
Bozeman, MT	Great Falls, MT	2nd
Butte, MT	Great Falls, MT	3rd
Cut Bank, MT	Great Falls, MT	2nd
Lewistown, MT	Great Falls, MT	3rd
Livingston, MT	Great Falls, MT	2nd
Miles City, MT	Great Falls, MT	3rd
Missoula, MT	Great Falls, MT	1st
Poughkeepsie, NY	Islip, NY	1st
Bradford, PA	Altoona, PA	3rd
DuBois, PA	Altoona, PA	4th
Bristol, TN	Nashville, TN	4th
Crossville, TN	Nashville, TN	4th
Alice, TX	San Angelo, TX	4th
San Antonio, TX	San Angelo, TX	4th
Wink, TX	San Angelo, TX	4th
Newport News, VA	Leesburg, VA	2nd
Laramie, WY	Casper, WY	2nd
Rawlins, WY	Casper, WY	2nd
Rock Springs, WY	Casper, WY	3rd
Sheridan, WY	Casper, WY	4th
Worland, WY	Casper, WY	3rd

AUTOMATED SURFACE OBSERVING SYSTEM (ASOS)

SENATOR LAUTENBERG: The National Weather Service (NWS) will procure, install and maintain the ASOS. What is the procurement schedule for ASOS?

ANSWER: A detailed procurement schedule has not been developed. The schedule will be baselined at contract award, which is anticipated for September 10, 1990.

SENATOR LAUTENBERG: What is the installation schedule? List sites and date of installation.

ANSWER: As stated previously, a detailed procurement schedule has not been developed and hence the associated sites and installation dates are not available. A general schedule is as follows:

Nontowered airports:
First Operational Readiness Demonstration - 1/91
Last Operational Readiness Demonstration - 7/92

Towered airports:
First Operational Readiness Demonstration - 8/93
Last Operational Readiness Demonstration - 9/94

SENATOR LAUTENBERG: How was the previously appropriated $19.6 million spent?

ANSWER: The previous appropriations were principally spent on Phase I preproduction ASOS contracts with the two competing companies (AAI Corporation and Magnavox, Inc.) and the commercial AWOS program development.

SENATOR LAUTENBERG: How many ASOS systems are going to be installed at the total estimated cost of this program ($91.1 million)?

ANSWER: The FAA will get 304 ASOS systems at towered airports. The budget includes FAA's portion of the joint development effort, an A-109 procurement using two competing preproduction contractors. Included in total costs are airport site surveys, site preparation, system hardware and software, installation, checkout, activation, communications start up and first year operations, and depot start up and first year operations.

SENATOR LAUTENBERG: Does this estimate cover the NWS maintenance costs? If so, how much?

ANSWER: The $91.9 million does not cover NWS maintenance costs. These costs will be funded out of the Operations Appropriation.

SENATOR LAUTENBERG: What does ASOS provide that AWOS doesn't?

ANSWER: ASOS provides a present weather sensor (occurrence, amount, and intensity) and a freezing rain sensor. AWOS does not provide these sensors.

SENATOR LAUTENBERG: You are requesting $6.5 million for this project. How much is for systems procurement, for installation, and for maintenance?

ANSWER: This $6.5 million is for the procurement and installation of AWOS/ASOS at FSS locations and towered airports. Approximately $5.8 million is for systems procurement and $7 million for installation. Maintenance is not included in this figure.

SENATOR LAUTENBERG: Since the National Weather Service will be doing this project, provide estimated dates of the actual obligation and outlay of this money.

ANSWER: Funding will be obligated by November 1, 1990, with outlay estimated by December 1, 1990.

SENATOR LAUTENBERG: What are the costs per ASOS unit?

ANSWER: The production contract will be awarded in the very near future. Current cost estimates for each ASOS system (hardware and software) ranges from $110,000 to $120,000. Exact costs will not be known until contract award. FAA's towered airport configurations tend to be at the high end of the cost range due to multiple sensor suites, sensors for additional weather parameters, extensive communication requirements, and additional display devices.

MICROWAVE LANDING SYSTEM

SENATOR LAUTENBERG: The Microwave Landing System (MLS) project has experienced considerable difficulty since its inception. FAA has terminated the contract for 178 MLSs and has initiated a demonstration program in response to Congressional concerns.

How many systems did FAA receive from Hazeltine before the contract was terminated, and has FAA taken action to recover funds from Hazeltine?

ANSWER: Hazeltine delivered two MLSs to the FAA before contract termination in 1989. The contract is now in litigation at the Justice Department.

SENATOR LAUTENBERG: Has FAA entered into negotiations with any third parties interested in taking over the Hazeltine contract? If so, what is the status of these negotiations?

ANSWER: At this time, the FAA has not entered into negotiations with any third party. However, the FAA is aware that another party is interested in buying the Hazeltine product line. This company is negotiating with the Hazeltine Corporation. Any agreement reached between the companies would have to be approved by the FAA and the Justice Department.

SENATOR LAUTENBERG: FAA designed the MLS demonstration program to prove the benefits of MLS over and above the current Instrument Landing Systems (ILS). What is the status of this effort and when does FAA expect to finish it? How does FAA intend to report the results of the demonstration program to Congress?

ANSWER: All nine projects in the demonstration program have started and are on schedule for completion by December 1991. Interim results are as follow:

- Frequency Interference - MIT has confirmed that there is a national problem in the ILS band. Further computer modeling is required to determine the imminence and severity of the problem.
- Wide Body Curved Approaches - 747 aircraft simulator studies with line airline crews confirm the feasibility of curved approaches in wide body aircraft. Further study of failure modes and effects is required.
- Capacity Enhancement - New York area simulations with actual New York controllers show reductions in flight time, satellite airport delay reductions, and flow rate increase with MLS procedures.

Six other evaluations are proceeding on schedule, and more than 80 industry representatives are participating in the design and oversight of the program. A report of current interim results was forwarded to Senator Lautenberg's office on May 1, 1990. Further results will be presented to Congress in 1991 and a final report will be submitted to Congress in 1992.

SENATOR LAUTENBERG: Last year, the FAA was provided with $12 million to complete the MLS demonstration program. The nine part program to evaluate and demonstrate the operation and economic benefits of MLS is to be completed at the end of the year.

Would you explain to the Committee why FAA went ahead on December 6, 1989 and endorsed MLS as the precision approach system of the NAS plan? What is the point of the evaluation if FAA has already reached its own conclusion?

ANSWER: The ILS/MLS policy statement had been in coordination a long time. It reflects the policy of FAA until the MLS demonstrations are complete. If the demonstrations are successful, full funds will be requested to proceed with the production of MLS systems.

SENATOR LAUTENBERG: One of the few remaining selling points of MLS is curved approach capability. Has FAA studied the noise impacts that curved approaches will create over new neighborhoods? Or would MLS curved approaches be like the East Coast Plan in New Jersey, where changes had to be made to satisfy noise complaints?

ANSWER: MLS curved approach capability allows more flexibility in determining precision landing approach paths. Thus, many MLS approaches will emulate noise procedures used in visual meteorological conditions, will avoid noise sensitive areas, and will not need new environmental impact statements. All curved approach procedures must be evaluated on a case by case basis; but, there is potential for noise reduction on MLS departures and arrivals.

SENATOR LAUTENBERG: FAA is requesting $35.2 million of MLS funds in fiscal year 1991. How much of this is for the demonstration program and how much is for development of Category III MLS?

ANSWER: The FAA is requesting $9.1 million for the demonstration program, $4.1 million for program engineering and regional support, and $22 million for Category III MLS prototype contract in fiscal year 1991.

INSTRUMENT LANDING SYSTEMS

SENATOR LAUTENBERG: List the 25 sites projected to receive the instrument landing systems (ILS) covered in your 1991 request. Include installation dates and cost per site.

ANSWER:

Location	Runway	Cost	Installation Date
Chicago, IL (O'Hare)	9L	$ 668,000	3/91
Chicago, IL (O'Hare)	9R	668,000	3/91
Chicago, IL (O'Hare)	22L	668,000	5/91
Chicago, IL (O'Hare)	4L	668,000	5/91
Chicago, IL (O'Hare)	4R	668,000	5/91
Appleton, WI	3	668,000	7/91
Decatur, IL	6	668,000	7/91

Baltimore-Washington, MD	28	$ 668,000	7/91
Farmingdale, NY	14	668,000	8/91
Latrobe, PA	23	668,000	10/91
N. Philadelphia, PA	24	668,000	10/91
Alton, IL	29	668,000	11/91
Chicago, IL (O'Hare)	32R	668,000	11/91
Chicago, IL (O'Hare)	27R	668,000	11/91
Chicago, IL (O'Hare)	22R	668,000	11/91
Concord, NH	35	668,000	12/91
Keene, NH	2	668,000	12/91
Laconia, NH	8	668,000	12/91
Ft. Lauderdale, FL	9L	668,000	12/91
Panama City, FL	14	668,000	1/92
Gulfport, MS	13	668,000	1/92
Rocky Mount, NC	4	668,000	1/92
Esler Field, LA	26	668,000	1/92
Santa Ana, CA	19R	668,000	1/92
Las Vegas, NV	25	668,000	1/92

SENATOR LAUTENBERG: List the 25 sites projected to receive the ILS replacements.

ANSWER:

Location	Runway
Dallas/Ft. Worth, TX	18L
Dallas/Ft. Worth, TX	17R
Dallas/Ft. Worth, TX	17L
Dallas/Ft. Worth, TX	35R
Dallas/Ft. Worth, TX	31R
Dallas/Ft. Worth, TX	18R
Wichita, KS	01L
Anchorage, AK	06R
Jackson, MS	15L
FAA Academy, OK	
FAA Depot - Test Bed	
Bangor, ME	15
Boston, MA	04R
Nashville, TN	02L
Morsant, LA	10
Seattle, WA	16R
Minneapolis, MN	29L
Philadelphia, PA	09R
LaGuardia, NY	22
Baltimore-Washington, MD	10
J.F Kennedy, NY	13L
Fairbanks, AK	01L
St. Louis, MO	30R
(National) Washington, DC	36
Andrew AFB, MD	19R

RUNWAY VISUAL RANGE (RVR)

SENATOR LAUTENBERG: List the 35 sites planned to receive runway visual range equipment.

ANSWER:

Windsor Locks	CT	Dayton	OH
Ft. Lauderdale	FL	FAA Academy	OK
Jacksonville	FL	FAA Depot	OK
Bloomington	IL	Tulsa	OK
Dupage	IL	Allentown	PA
Moline	IL	Philadelphia	PA
Peoria	IL	Pittsburgh	PA
Elkhart	IN	Providence	RI
Indianapolis	IN	Columbia	SC
Hyannis	MA	Nashville	TN
New Bedford	MA	Alliance	TX
Detroit	MI	Corpus Christie	TX
Flint	MI	Houston	TX
Minneapolis	MN	Midland	TX
Minot	ND	Norfolk	VA
Albany	NY	Green Bay	WI
Islip	NY	Charleston	WV
Rochester	NY		

RADAR MICROWAVE LINK (RML) REPLACEMENT

SENATOR LAUTENBERG: FAA has been appropriated over $250 million for this project. The justification for this year's request of $21 million emphasizes that the money is needed to acquire a restoral switch at each ARTCC. In the event of failures, this switch will provide for automated rerouting of communications through alternate network paths to maintain critical connection and services.

Why was the requirement for a restoral switch, or equivalent device not included in the original specifications which led to the FY 1985 award?

ANSWER: The original program plan called for the acquisition of the restoral switching system using a separate contract from the basic Radio Communications Link (RCL) microwave network to be awarded at a later date. Therefore, the original specifications for the microwave network did not contain requirements for the restoral switching. This was planned for several reasons:

The detailed requirements for the microwave system were well known at that time whereas the requirements for the switching system were still under development.

The microwave network implementation at nearly 1000 sites was extensive compared to the switching system implementation at 24 sites and, therefore, would take considerably longer.

We did not want to defer the early benefits to be obtained from the new microwave system until the requirements of the switching system were well defined; therefore, we proceeded with the RCL contract. Our strategy, from the beginning, was to award separate contracts for the basic microwave system and the switching system.

SENATOR LAUTENBERG: Were performance criteria included in the original RML contract awarded in FY 1985, and if so, why isn't the switch provided at no cost to the FAA?

ANSWER: Performance criteria were included in the original

RML replacement contract covering the basic microwave transmission path from ARTCC to ARTCC. This was in accordance with our acquisition strategy to award separate contracts for the microwave and switching equipment.

SENATOR LAUTENBERG: How and when was the need for the restoral switch identified? Provide the Committee with a copy of the analysis which justified the addition of such a switch.

ANSWER: The requirement for the restoral switch was established when the Radar Microwave Link (RML) Replacement and Expansion Program was established. This requirement was necessary because the basic RCL microwave system was designed with an availability of 0.9998, and National Air Space critical circuits require an availability of 0.99999. The restoral switch will provide alternate path switching necessary to achieve the required 0.99999 availability for critical RCL circuits. These requirements are documented in NAS System Specification (NAS-SS-1000), Volume IV, dated December 6, 1986. This is a large document. We have extracted the pertinent paragraph as follows:

> Paragraph 3.2.1.4.1.2.1 Availability, reads (in part): "Taking into account the backup capability provided by alternate transmission paths, the transmission equipment shall provide the following availability:
>
> a. Critical service shall have an availability of at least 0.99999;"

TERMINAL DOPPLER WEATHER RADAR (TDWR)

SENATOR LAUTENBERG: What are the total estimated costs for this system?

ANSWER: The total estimated cost for the Terminal Doppler Weather Radar program is $322.6 million.

SENATOR LAUTENBERG: What is the status of the TDWR contract, i.e., how many systems in total, what percent of the necessary work has been accomplished to date?

ANSWER: The TDWR contract remains on schedule for delivery of the first system to the FAA Aeronautical Center for test and training in December 1991.

The production readiness review has been held and five units have been released for fabrication. The remaining units have been released for partial fabrication.

SENATOR LAUTENBERG: Please provide a site-by-site breakdown of your TDWR implementation plan, including installation date and operational date.

ANSWER: The breakdown is as follows:

	Location	Delivery Date	Operational Date
1.	Aeronautical Center, OK	12/91	10/92
2.	Memphis, TN	10/92	6/93
3.	Houston (Intercon.), TX	10/92	6/93
4.	Ft. Lauderdale, FL	3/93	9/93
5.	Denver (new airport),CO	3/93	9/93

6.	Atlanta, GA	3/93	9/93
7.	Chicago (O'Hare), IL	4/93	10/93
8.	New York (Kennedy), NY	4/93	10/93
9.	Miami, FL	4/93	10/93
10.	Dallas/Ft. Worth, TX	5/93	11/93
11.	Newark, NJ	5/93	11/93
12.	Orlando, FL	5/93	11/93
13.	St. Louis, MO	6/93	12/93
14.	Pittsburgh, PA	6/93	12/93
15.	Tampa, FL	6/93	12/93
16.	Andrew AFB, MD	7/93	1/94
17.	New Orleans, LA	7/93	1/94
18.	New York (LaGuardia), NY	7/93	1/94
19.	Minneapolis, MN	8/93	2/94
20.	Washington (National), VA	8/93	2/94
21.	FAA Technical Center, NJ	8/93	2/94
22.	Detroit, MI	9/93	3/94
23.	Charlotte, NC	9/93	3/94
24.	Houston (Hobby), TX	9/93	3/94
25.	Cincinnati (Covington), KY	10/93	4/94
26.	Kansas City, MO	10/93	4/94
27.	Philadelphia, PA	10/93	4/94
28.	West Palm Beach, FL	11/93	5/94
29.	Phoenix, AZ	11/93	5/94
30.	Dallas (Love), TX	11/93	5/94
31.	Raleigh-Durham, NC	12/93	6/94
32.	Salt Lake City, UT	12/93	6/94
33.	Cleveland, OH	12/93	6/94
34.	Washington (Dulles), VA	1/94	7/94
35.	Louisville, KY	1/94	7/94
36.	Dayton, OH	1/94	7/94
37.	Baltimore, MD	2/94	8/94
38.	Boston, MA	2/94	8/94
39.	Indianapolis, IN	2/94	8/94
40.	Nashville, TN	3/94	9/94
41.	Columbus, OH	3/94	9/94
42.	Tulsa, OK	3/94	9/94
43.	San Juan, PR	4/94	10/94
44.	Milwaukee, WI	4/94	10/94
45.	Oklahoma City, OK	4/94	10/94
46.	Wichita, KS	5/94	11/94
47.	Chicago (Midway), IL	5/94	11/94

TERMINAL NEXT GENERATION WEATHER RADAR (TERMINAL NEXRAD)

SENATOR LAUTENBERG: It is the Committee's understanding that FAA plans to terminate the terminal NEXRAD program. Why?

ANSWER: The estimated schedule for terminal NEXRAD now overlaps the TDWR schedule resulting in no useful life for the terminal NEXRAD units.

SENATOR LAUTENBERG: How much has FAA expended for the Terminal NEXRAD program and, if terminated, how much is available to be used following reprogramming approval?

ANSWER: The total funding appropriated through fiscal year 1990 for terminal NEXRAD/offshore NEXRAD is $92 million. The FAA has expended $87 million. There is a savings of $5 million in FY 1990 because of termination of the program. We plan to submit a request for reprogramming approval to use these funds for other requirements.

SENATOR LAUTENBERG: You are requesting $24.7 million for this program for 1991. Why? How much of this is for termination costs?

ANSWER: The $24.7 million is for the standard NEXRAD effort. The terminal NEXRAD request is for $5 million.

No termination costs will be required in the terminal NEXRAD program since the development effort is cost plus fixed-fee and 14 radars will be used as offshore NEXRAD's. The three unneeded former terminal NEXRAD radars will be negotiated out of the contract.

Even though the $5 million is not needed in FY 1991 for terminal NEXRAD, we request this funding be made available for spare parts for the NEXRAD program.

AVIATION SAFETY ANALYSIS SYSTEM

SENATOR LAUTENBERG: FAA is requesting over $25 million for this program. Monies are being requested for the acquisition of the first phase of hardware and software "infrastructure" requirements and to continue the existing system.

Provide the Subcommittee with the ASAS requirements justifying the specific hardware and software solution being proposed.

ANSWER: We have a 600 page encyclopedia which explains in detail the requirements and plans for each of the more than 40 ASAS project requirements.

It is important to note that the Office of the Secretary of Transportation, The DOT Inspector General, The General Accounting Office, and the Office of Technology Assessment have each independently reviewed all of the major components of the ASAS. In every case, without exception, the FAA has been urged to request and expend the funds requested here. Not making these funds available will have a crippling effect on the ability of our safety and security inspectors and will make them unable to effectively perform day to day safety functions.

SENATOR LAUTENBERG: Why isn't this part of the CORN project?

ANSWER: The $25.2 million requested is for the acquisition of microcomputer equipment, subsystem development, and system engineering. The CORN program is intended to provide a vehicle for the acquisition of mainframe level (not microcomputer) computer capabilities and services. The CORN program will not be used for the expenditure of the referenced $25.2 million. The acquisition of the microcomputer equipment will utilize the agency's OATS contract vehicle. In either case, OATS and CORN, each of these programs provide a vehicle for obtaining computer hardware, software, and implementation support. They are not intended to provide application development and engineering support.

SENATOR LAUTENBERG: Provide a breakdown of your $25.2 million request by maintenance of the existing system, system design and Phase I of the hardware/software upgrade. Why is maintenance of the existing system not included in the O&M account?

ANSWER: The breakdown of the $25.2 million is as follows:

Maintenance of existing hardware	$ -
Application system design & operations	12.2
Phase I upgrade	13.0
Total	$25.2

Funding for maintenance of the existing hardware is obtained from the Operations budget account.

SENATOR LAUTENBERG: When will the request for proposals for the Phase I hardware and software be issued?

ANSWER: The Phase I hardware and software will be acquired through the agency's Office Automation Technology and Services (OATS) contract. As such, there is no requirement for a proposal to be issued. A task order will be written for the OATS contract for this hardware and software as soon as funds are identified. This is currently planned for the fourth quarter of FY 1990.

AIRPORT SURVEILLANCE RADAR

SENATOR LAUTENBERG: FAA has been appropriated over $630 million for its airport surveillance radar program. The agency is requesting over $47 million to pay for the construction of four ASR-9 sites and to continue necessary ASR improvements.

How many more non-ISP ASR-9 sites still remain to be installed after the four listed in the fiscal year 1991 request?

ANSWER: There are no other non-ISP radars to be installed after the four listed in the fiscal year 1991 request.

SENATOR LAUTENBERG: What accounts for the increased request in 1991 versus the 1990 level?

ANSWER: The increase request in fiscal year 1991 is due to the requirement to complete the establishment of the four systems, continued site preparation and construction to leapfrog 12 ASR-7/8 radar systems, and complete ASR tower raise projects to enhance radar coverage.

SENATOR LAUTENBERG: What is the latest schedule for the ASR program by site, including installation dates and operational dates?

ANSWER: The following is the latest ASR-9 delivery schedule.

SYS	LOCATION	ST	DELIVERY (MO/YR)	COMMISSION (MO/YR)
1	HUNTSVILLE	AL	Dec-87	May-89
2	TECH CENTER(FAA)	NJ	Jan-89	Support
3	OKC ACADEMY1	OK	Jan-89	Support
4	OKC TEST FACILITY	OK	Feb-89	Support
5	NEWBURGH-STEWART	NY	May-89	Apr-90
6	RIO GRANDE VALLEY	TX	May-89	Oct-89
7	ORLANDO	FL	Jun-89	Feb-90
8	SALT LAKE CITY	UT	Jul-89	Feb-90
9	DC-DULLES	VA	Jul-89	Jul-90
10	PASCO	WA	Jul-89	Jan-90
11	MOSES LAKE	WA	Aug-89	Fen-90

12	LOS ANGELES ASR-7	CA	Aug-89	Mar-90
13	LOS ANGELES ASR-4	CA	Aug-89	Mar-90
14	SAC-MCCLELLAND	CA	Sep-89	Jun-90
15	SAC-BEALE	CA	Sep-89	Jun-90
16	WICHITA	KS	Sep-89	Jul-90
17	BALTIMORE	MD	Oct-89	Jul-90
18	TULSA	OK	Oct-89	Jul-90
19	CHARLESTON	SC	Oct-89	Jul-90
20	COVENTRY	RI	Nov-89	Aug-90
21	RALEIGH	NC	Nov-89	Aug-90
22	ROCHESTER	NY	Dec-89	Sep-90
23	TOLEDO	OH	Dec-89	Oct-90
24	SYRACUSE	NY	Dec-89	Oct-90
25	CHARLOTTE	NC	Jan-89	Sep-90
26	BIRMINGHAM	AL	Feb-90	Sep-90
27	OMAHA-OFFUTT	NE	Feb-90	Sep-90
28	D-ADDISON (DFW)	TX	Mar-90	Sep-90
29	MADISON	WI	Mar-90	Sep-90
30	CHI-TINLEY	IL	Mar-90	Oct-90
31	CHI-O'HARE	IL	Apr-90	Oct-90
32	ATLANTA	GA	Apr-90	Oct-90
33	PITTSBURGH	PA	May-90	Nov-90
34	OAKLAND	CA	May-90	Nov-90
35	SAN JOSE-MOFFETT	CA	Jun-90	Nov-90
36	NORFOLK	VA	Jun-90	Dec-90
37	RICHMOND	VA	Jun-90	Dec-90
38	BOSTON	MA	Jul-90	Dec-90
39	FT LAUDERDALE	FL	Jul-90	Jan-91
40	PHILADELPHIA	PA	Jul-90	Jan-91
41	INDIANAPOLIS	IN	Aug-90	Jan-91
42	MIAMI	FL	Aug-90	Feb-91
43	HARRISBURG	PA	Aug-90	Feb-91
44	KANSAS CITY	MO	Sep-90	Feb-91
45	DENVER	CO	Sep-90	Mar-91
46	CLEVELAND	OH	Sep-90	Feb-91
47	NANTUCKET	MA	Oct-90	Mar-91
48	MINNEAPOLIS	MN	Oct-90	Mar-91
49	SAN ANTONIO	TX	Oct-90	Mar-91
50	AUSTIN	TX	Nov-90	Apr-91
51	ATLANTIC CITY	NJ	Nov-90	Apr-91
52	PHOENIX	AZ	Nov-90	Apr-91
53	HOUSTON-IAH	TX	Dec-90	May-91
54	HOUSTON-HOBBY	TX	Dec-90	May-91
55	ST LOUIS	MO	Dec-90	May-91
56	DC-ANDREWS	MD	Jan-91	Jun-91
57	COLUMBUS	OH	Jan-91	Jun-91
58	MEMPHIS	TN	Jan-91	Jun-91
59	PORTLAND	OR	Feb-91	Jul-91
60	DETROIT	MI	Feb-91	Jul-91
61	NEW ORLEANS - MOI	LA	Feb-91	Jul-91
62	D-CLY'VL (WEST)	TX	Mar-91	Aug-91
63	LONG BEACH	CA	Mar-91	Aug-91
64	SANTA ANA-EL TORO	CA	Mar-91	Aug-91
65	BUFFALO	NY	Apr-91	Sep-91
66	DAYTONA BEACH	FL	Apr-91	Sep-91
67	SAN DIEGO-MIRAMAR	CA	Apr-91	Sep-91
68	MILWAUKEE	WI	May-91	Oct-91
69	NEWARK	NJ	May-91	Oct-91

70	DAYTON	OH	May-91	Oct-91
71	LAS VEGAS	NV	Jun-91	Nov-91
72	NASHVILLE	TN	Jun-91	Nov-91
73	ONTARIO	CA	Jun-91	Nov-91
74	WINDSOR LOCKS	CT	Jul-91	Dec-91
75	JACKSONVILLE	FL	Jul-91	Dec-91
76	HILLSBORO	OR	Jul-91	Dec-91
77	OKC WILL ROGERS	OK	Aug-91	Jan-92
78	WHITE PLAINS	NY	Aug-91	Jan-92
79	ALBUQUERQUE	NM	Aug-91	Jan-92
80	GREENSBORO	NC	Sep-91	Feb-92
81	KNOXVILLE	TN	Sep-91	Feb-92
82	BURBANK	CA	Sep-91	Feb-92
83	NEW YORK - JFK	NY	Oct-91	Mar-92
84	DES MOINES	IA	Oct-91	Mar-92
85	DC-NATIONAL	VA	Oct-91	Mar-92
86	MONTGOMERY-MAXWEL	AL	Nov-91	Apr-92
87	ALBANY	NY	Nov-91	Apr-92
88	SEATTLE	WA	Nov-91	Apr-92
89	EL PASO-BIGGS	TX	Dec-91	May-92
90	LUBBOCK-REESE	TX	Dec-91	May-92
91	SHREVEPORT-BARKSD	LA	Dec-91	May-92
92	TUCSON-DAVIS MONT	AZ	Jan-92	Jun-92
93	GRAND RAPIDS	MI	Jan-92	Jun-92
94	FT WAYNE	IN	Jan-92	Jun-92
95	ISLIP	NY	Feb-92	Jul-92
96	COVINGTON	KY	Feb-92	Jul-92
97	ASHEVILLE	NC	Feb-92	Jul-92
98	CEDAR RAPIDS	IA	Mar-92	Aug-92
99	SARASOTA	FL	Mar-92	Aug-92
100	HONOLULU	HI	Mar-92	Aug-92
101	TAMPA	FL	Apr-92	Sep-92
102	LOUISVILLE	KY	Apr-92	Sep-92
103	MEDFORD	OR	Apr-92	Sep-92
104	GAINESVILLE	FL	May-92	Oct-92
105	CHARLOTTESVILLE	VA	May-92	Oct-92
106	MISSOULA	MT	May-92	Oct-92
107	BOSTON 2	MA	Jun-92	Nov-92
108	DETROIT 2	MI	Jun-92	Nov-92
109	COLUMBIA	MO	Jun-92	Nov-92
110	SAN ANGELO	TX	Jul-92	Dec-92
111	FAYETTEVILLE	AR	Jul-92	Dec-92
112	DFW East	TX	Jul-92	Dec-92
113	DENVER 2	CO	Aug-92	Jan-93
114	FAA FACILITY	OK	May-90	Support
115	FT. RUCKER	AL	Jan-90	Jun-90
116	NELLIS AFB	NV	Mar-90	Aug-90
117	WHITE SANDS 1	CA	FOB Factory	DOD
118	WHITE SANDS 2	CA	FOB Factory	DOD
119	WHITE SANDS 3	CA	FOB Factory	DOD
120	BOVINE	UT	TBD	DOD
121	TROUT CREEK	UT	TBD	DOD
122	TIPPETT MIDDLE	UT	TBD	DOD
123	CEDAR MT	UT	TBD	DOD
124	FT CAMPBELL	KY	TBD	DOD

PRECISION RUNWAY MONITORS

SENATOR LAUTENBERG: The FAA is currently determining the feasibility of two technologies that will allow aircraft to land on closely spaced parallel runways. This equipment, when eventually acquired and installed, will enable airports to use these runways in adverse weather conditions, thereby increasing the airport's capacity. The F&E request is for over $10 million and covers the acquisition of production sensors and to acquire long lead items for a sensor at another airport.

In light of FAA's continued testing of both precision runway monitors and questions concerning where they will be installed, isn't it more appropriate for FAA to characterize this project as RE&D rather than F&E?

ANSWER: FY 1991 funding for the Precision Runway Monitor is requested in both F&E and R&D accounts. FAA's demonstration tests of the precision runway monitors applied to dual parallel runways will be complete in September 1990, at which point the program will be ready for an F&E expenditure to install the new technology. The FY 1991 R&D request is for developing the application of the sensor to converging runways and to triple and quadruple parallel runways.

SENATOR LAUTENBERG: FAA is now conducting tests at Raleigh-Durham and Memphis. When will these tests be completed?

ANSWER: Demonstration of the dual parallel runway application of the Precision Runway Monitor technology at Raleigh-Durham and Memphis will be complete in September 1990. Demonstrations of application to converging runways and to triple and quadruple parallel runways will continue in 1991.

SENATOR LAUTENBERG: What specifically will the $10 million buy; i.e., at how many airports can the quick-scan sensors be installed?

ANSWER: The $10 million will complete the Congressionally directed upgrade to the R&D system at Raleigh-Durham. The upgrade will result in a sensor that can be commissioned for operational service. A portion of the $10 million request will be applied to ordering long-lead procurement items for a second sensor.

SENATOR LAUTENBERG: What is the lead time between contracting for and installing the equipment?

ANSWER: If it proves in the best interests of the Government to award such a contract to the firm that built the Raleigh-Durham system, FAA believes the lead time between contracting for and commissioning the equipment is about 30 months. For a vendor building a new design, the interval is about 60 months.

SENATOR LAUTENBERG: Does quick-scan radar help alleviate the runway incursion problem? If so, how?

ANSWER: The radar makes no contribution to the runway incursion problem.

AIRPORT SURFACE DETECTION EQUIPMENT (ASDE)

SENATOR LAUTENBERG: FAA is requesting $6 million to defray costs of strengthening existing tower cabs so that ASDE-3 can be mounted on them. FAA acknowledges that they are experiencing higher than expected costs for regional activities.

Will funds be needed beyond fiscal year 1991 to complete installation of all ASDE-3 radars?

ANSWER: The installation of the last ASDE-3 system is scheduled to be completed by the fourth quarter of FY 1992 (July 1992). No additional funds are required beyond FY 1991 to meet current program installation requirements.

SENATOR LAUTENBERG: Provide a current implementation schedule for the ASDE-3 locations.

ANSWER: The schedule is as follows:

Site Location	Implementation Date
Pittsburgh, PA	12/31/90
FAA Academy,Ok City, OK	N/A
Denver, CO (Stapleton) (1)	04/30/91
Denver, CO (DVX) (1)	06/30/92
Dallas/Ft. Worth, TX	05/31/91
Philadelphia, PA	05/31/91
Los Angeles, CA (1)	06/30/91
Los Angeles, CA (1)	06/30/92
Chicago, ILL	06/30/91
Atlanta, GA	07/31/91
San Francisco, CA	07/31/90
Boston, MA	08/31/90
Newark, NJ	08/31/91
Baltimore, MD	09/30/91
Cleveland, OH	09/30/91
Seattle, WA	10/31/91
Portland, OR	10/31/91
Dulles, VA	11/30/91
Andrews AFB, MD	11/30/91
Miami, FL	12/31/91
New York - La Guardia, NY	12/31/91
St. Louis, MO	01/31/92
Houston, TX (1),	11/31/92
Houston, TX (1)	07/31/92
Washington National, VA	02/28/92
Memphis, TN	02/28/92
Minneapolis, MN	03/31/92
Detroit, MI	03/31/92
Tampa, FL	04/30/92
New York - Kennedy, NY	04/30/92
New Orleans, LA	05/31/92
Kansas City, MO	05/31/92
Anchorage, AL	06/30/92

(1) Dual Sensor Facilities

SENATOR LAUTENBERG: Is FAA planning to modify the ASE-3 radar to provide runway incursion alert capabilities?

ANSWER: We will add a new interface to the ASDE-3 but will not require any modifications to the existing ASDE-3 radar.

SENATOR LAUTENBERG: How would this work and what are the costs?

ANSWER: The mechanism to provide runway incursion alert capabilities will be through the Airport Movement Area Safety System (AMASS). The AMASS will use ASDE-3 radar data to provide an alert to the air traffic controller. The total F&E cost for the AMASS contract is estimated at $23 million.

SENATOR LAUTENBERG: What other systems are in place to detect runway incursions?

ANSWER: There are no other systems in place to detect runway incursions.

MODE S SURVEILLANCE AND COMMUNICATIONS EQUIPMENT

SENATOR LAUTENBERG: In 1983, GAO questioned FAA's plans to buy Mode S, recommending that the agency further test the system before proceeding. Although FAA dismissed these concerns and awarded a production contract, we now find that deliveries will be at least 5 years late and the agency has already spent about 50 percent of the contract ceiling price without a single system being delivered. Given this experience, would you now agree that FAA needs to adequately develop and test major systems before committing to production contracts?

ANSWER: FAA agrees that there should be adequate development and testing of major system acquisitions before production.

SENATOR LAUTENBERG: Although FAA testified in April 1989 that the contractor was successfully overcoming technical problems, FAA notified the contractor, via a cure notice, in June 1989 that its continuing inability to perform could lead the agency to terminate the contract. The cure notice is a serious legal step and must have been under consideration when FAA testified. How could FAA officials not have been aware that the agency was considering terminating the contract when they testified last April?

ANSWER: At the time of the testimony in April 1989, the contractor had presented a reasonable approach for resolving the software development problems, and a revised program schedule had been incorporated in the contract. Shortly after the testimony, serious hardware deficiencies were uncovered which threatened the new schedule, and led to the cure letter.

SENATOR LAUTENBERG: Why did it take so long for FAA to formally act to resolve the problems before issuing the cure notice?

ANSWER: The FAA was aware of the software development difficulties and had been managing this problem; this was not considered adequate justification for sending a cure letter. When additional serious hardware flaws were uncovered, a cure notice was sent without delay.

SENATOR LAUTENBERG: What is your current assessment of the contract status and the prospect that the contractor can in fact overcome problems and deploy a system meeting requirements?

ANSWER: The contractor has a work plan and clearly is in the software/hardware integration and test phase. The effort continues to be high risk, both in the technical and schedule arenas, with a medium prospect for success. Progress in the next 6-8 months should indicate the contractor's ability to successfully complete the program.

SENATOR LAUTENBERG: Given the $271 million contract ceiling and the problems being encountered developing one system, what is the prospect that all 137 systems will be developed and deployed without an increase in the ceiling price?

ANSWER: The Government has no existing liability beyond the $271 million ceiling. We intend to hold the contractor to all the terms and conditions of the contract to the extent possible.

SENATOR LAUTENBERG: Will we see a working Mode S system deployed within FAA's current schedule estimate?

ANSWER: Although the program has made significant progress within the last year, there remain significant schedule risks in the integration and testing phases of the program. This program is receiving significant senior management attention, both within the FAA and by the contractor, to ensure that the contractor delivers within the current contract schedule.

SENATOR LAUTENBERG: Even after proposing changes to resolve problems, the contractor has not been able to maintain its proposed schedule and FAA has again revised its schedule estimate -- slipping delivery of the first fully capable, operational system another year, from April 1992 to April 1993. Do you agree that these events should trigger a re-examination of the Government's contract options? If not, how long should we continue down the current path?

ANSWER: Prior to committing to the recent 16 month contract extension, the FAA determined that the current contract vehicle was the most expeditious way to procure Mode S systems. We are continuing to closely monitor the contractor's performance, and to further assess our contractual and program options.

SENATOR LAUTENBERG: In the 1991 budget submission FAA is requesting $15.8 million for spares/repairs. Given that not one system has been delivered, can you explain why the $15.8 million is needed?

ANSWER: In order to plan for an orderly acquisition of spare parts to support operational Mode S systems, budget authority must be received in FY 1991. Although the spares procurement must be initiated in FY 1991, the contract will not be finalized until the contractor has demonstrated substantial progress in the final testing of the first sensor.

SENATOR LAUTENBERG: If approved, FAA's request of $37 million would bring the total appropriated funds for Mode S to about $367 million. Given that the Government's obligation under the Mode S contract is limited to $271 million, can you explain the $97 million difference and the justification for these funds?

ANSWER: The additional funding is for the program office, support contractors, ancillary procurement (e.g., antennas and rotary joints), and Regional activities related to Mode S procurement and deployment.

SENATOR LAUTENBERG: Regarding your decision to spend another $1.2 billion to buy 259 more Mode S systems, how did you reach this conclusion when you are unable to get any of the first 137 systems to work?

ANSWER: FAA has not yet "decided" to spend another $1.2 billion to buy additional Mode S system. FAA, however, has prepared for that contingency in a long-range planning sense. FAA is proceeding with analysis to address its mission need and the alternatives to replace obsolete ATCBI, establish terminal radar services at new qualifying locations and deal with discontinuities in data link coverage. Once the analysis is complete FAA will make an investment decision and reconcile its long range plans with that decision.

SENATOR LAUTENBERG: Although analyzing requirements is fundamental to making prudent investment decisions, GAO has pointed out that FAA did not establish that providing data communications at lower altitudes is economically or operationally justified. Doesn't FAA normally evaluate traffic levels, costs, and economic and operational benefits before determining the airspace in which air traffic control services should be provided, and if so why wasn't this done in this case?

ANSWER: FAA does conduct such analysis before deciding on acquisition of ATC services. FAA has not made any investment decisions to provide data link at lower altitudes. Providing data communications at lower altitudes is not the major objective of a potential acquisition of additional Mode S, however dealing with discontinuities in data communication at lower altitude is an operational concern.

SENATOR LAUTENBERG: The lack of a requirements analysis is also inconsistent with assurances FAA officials provided to this Subcommittee during February 1987 testimony. At that time, an FAA official conceded that requirements changes had contributed to cost growth and delays on other major systems and noted that a rigid process had been instituted to properly justify future requirements changes. What happened to that process, and again, what credibility can the Subcommittee place in FAA's assurances that requirements are being controlled?

ANSWER: FAA has in place an effective process to control technical requirements changes to major system acquisition that are under contract. This process does not replace FAA's practice of analyzing requirements prior to deciding on acquisition of new systems or additional quantities of similar systems.

SENATOR LAUTENBERG: Last year we asked why your budget justification called for future requirements of 60 rather than the planned 259 additional Mode S systems. At that time you conceded that FAA had indeed decided to acquire 259 systems at an estimated cost of $1.2 billion. Can you explain (1) why this year's budget request still does not reflect this decision, (2) when it will reflect the decision, and (3) what credibility this Subcommittee can place in FAA's budget estimates?

ANSWER: FAA has not yet decided to acquire 259 additional Mode S. FAA long range plans, however, do include this possibility. Once the analysis is performed to either validate or invalidate the possibility of additional Mode S, FAA will take appropriate budget request and acquisition actions.

SENATOR LAUTENBERG: Did FAA properly evaluate a full range of alternatives before reaching its decision to buy additional systems. Last year we asked you for a copy of the analysis? Please provide a summary of that evaluation.

ANSWER: FAA has not decided to acquire additional Modes S. FAA long-range planning, however, does include that possibility. FAA will analyze all alternatives to satisfying its mission needs before making an investment decision. No additional analysis data is available at this time.

SENATOR LAUTENBERG: We understand FAA is exploring using satellite technology to provide surveillance information for oceanic, low altitude, and mountainous regions. In addition, the agency is now working closely with industry and international organizations to develop an architecture which would allow data communications using any of several different systems. Why has FAA given such limited attention to satellites as an alternative to deploying more Mode S systems, especially in view of continuing Mode S problems?

ANSWER: The FAA recognizes the potential in satellite technology, and is actively participating in standards-setting organizations to lay the groundwork for implementing this technology. Satellite technology will be addressed in the analysis of costs, benefits, and tradeoffs required to justify the procurement of any new surveillance or data-link systems.

SENATOR LAUTENBERG: Finally, past GAO reports pointed out that FAA needs to properly evaluate a full range of alternatives as part of the major system acquisition process. FAA, however, has already selected Mode S as the preferred alternative and, therefore, the planned benefit/cost analysis will only compare the benefits and costs associated with deploying additional Mode S systems against leaving the remaining beacon radars in place. Do you believe this approach complies with Office of Management and Budget policy and is a reasonable way to select the best alternative?

ANSWER: No FAA decision has been made to use Mode S for future beacon replacements. Any decision will be supported by a thorough requirements, cost benefits and trade off analysis that will comply with DOT/OMB policies.

SENATOR LAUTENBERG: Your current fixed-price contract has a ceiling price of $271 million for delivery of 137 Mode S systems. Given the continuing problems developing one system, what is the prospect that all 137 systems will be developed and deployed without an increase in the ceiling price?

ANSWER: The Government has no existing liability beyond the $271 million ceiling. We intend to hold the contractor to all the terms and conditions of the contract to the extent possible.

SENATOR LAUTENBERG: Even after proposing changes to resolve problems, the contractor has not been able to maintain his proposed schedule and FAA has again revised its schedule -- slipping delivery of the first fully operational system another year, from April 1992 to April 1993. (The original estimate was 1988.) Do you agree that these events should trigger a re-examination of the Government's contract options? If not, how long should we continue down the current path?

ANSWER: Prior to committing to the recent 16-month contract extension, the FAA determined that the current contract vehicle was the most expeditious way to procure Mode S systems. We will continue to closely monitor the contractor's performance, and will again review our contractual options if the schedule slips.

COMMUNICATIONS SYSTEMS

SENATOR LAUTENBERG: Given that many of your communications ownership projects are to save lease costs, why are lease costs continuing to grow?

ANSWER: The FAA's communications ownership projects -- such as the Radio Communications Link, the Data Multiplexing Network, the National Airspace Data Interchange Network and voice switch acquisitions -- are indeed producing substantial lease cost savings and avoidances. Lease costs continue to grow because these savings do not fully offset the costs for increased telecommunications requirements in support of National Airspace System projects and larger volumes of air traffic.

SENATOR LAUTENBERG: Why has the earlier savings projection in the Radio Communications Link project changed? How are future savings projections being altered?

ANSWER: Savings projections in the Radio Communications Link project are reassessed each year based upon:

- updated information concerning the requirements and schedules of projects needing communications,
- refinements to network planning and engineering strategies, and
- recalculation of savings based on changes to leased services prices.

We do not currently expect that our future savings projections will change significantly.

SENATOR LAUTENBERG: What mechanism does FAA have to insure timely conversion from leased lines to the Radio Communications Link?

ANSWER: The FAA has established a Telecommunications Management and Operations (TM&O) Division. Responsibilities include promoting the maximum utilization of the Radio Communications Link (RCL). Candidate circuit lists are developed in advance of RCL segment cutovers, and circuit engineering packages are issued for regional implementation. In addition, the TM&O organization tracks cutover activity on a monthly basis, and takes actions, as necessary, to correct any problems which may inhibit full use of the RCL.

SENATOR LAUTENBERG: Is the additional $8 million requested for access factored into the savings projections? If not, when will savings actually be realized through the Radio Communications Link project?

ANSWER: The $8 million is a non-recurring cost to obtain telephone company access to remote Radio Communications Link sites which do not have existing telephone service. This cost is not included in the savings projections. However, it is important to note the savings occur and accrue every year, while the non-recurring costs are for one year only. In fact, leased communications cost savings and avoidances have accrued since FY 1987.

SENATOR LAUTENBERG: Has FAA identified specific milestones and strategies for transitioning its communication systems to a digital architecture? If so, please describe them.

ANSWER: The FAA is currently developing a Telecommunications Strategic Plan. The predominant recommendation of this strategic plan is for the evolutionary transition of FAA telecommunications to a largely digital architecture. Early milestones in this transition include the competitive replacement of leased analog circuits with a leased system featuring a digital backbone; the introduction of digital low-density microwave systems; the expansion of the Data Multiplexing Network to include multiplexing of digital transmission facilities; and the acquisition of a digital FAA Telecommunications Satellite system. The modification or eventual replacement of existing systems to achieve digital capabilities is also being examined.

SENATOR LAUTENBERG: How will transition to a digital environment impact the costs of projects that are currently being procured or developed? Specifically,

- the analog Radio Communications Link,
- the Data Multiplexing Network,
- analog and digital voice switches, including the Voice Switching and Control System, the Tower Communication System, and the Integrated Communications Switching Systems, and
- data switches, such as the National Airspace Data Interchange Network.

ANSWER: The transition to a digital environment, as presently envisioned, will take place in an evolutionary manner, with benefits from current capital investments accruing throughout the period. With respect to specific programs, our initial assessment is as follows:

- A limited digital capability will be added to the analog Radio Communications Link using "T-1 modem" technology. This approach was part of the original program, so there will be no cost impact. In the longer term, the FAA is exploring the replacement or conversion of the existing analog system with a digital one. Such an effort is estimated to cost $133 million.
- The most recent phase of the Data Multiplexing Network, for which a contract was recently awarded, includes digital circuit multiplexing equipment. Thus, this project as already conceived will foster the transition to a digital environment. There is no new cost impact.
- Voice switching systems, such as the Voice Switching and Control System (VSCS), the Tower Communication System (TCS),

and the Integrated Communications Switching System (ICSS), will fulfill their operational missions in either an analog or a digital telecommunications environment. Since the VSCS and the TCS are already digital devices internally, there are operational advantages associated with a direct digital interface to the future transmission system. Although VSCS does not presently include a requirement for such an interface, it may be possible to add one at minimal cost. In the case of TCS, the specifications include a direct digital interface, so no additional costs will be incurred to support transition to a digital environment. ICSS cannot readily be modified to include a digital interface, but commercially available analog to digital conversion equipment can be deployed where needed.

- Data switches, such as the National Airspace Data Interchange Network, will operate unchanged in a digital environment. In fact, since no modems will be used in the future, interfaces and transmission quality should be improved.

SENATOR LAUTENBERG: In the 1991 F&E request, page F&E-44, FAA is requesting $3.6 million for the satellite communications back-up project. The FY 1991 request is the first time that this project appears in the budget request and includes an additional $64.5 million in estimated funding for future years. What are the design, development, and implementation objectives and plans for this project?

ANSWER: A principal objective of the satellite communications back-up project is to improve the availability of critical telecommunications services such as controller to pilot radio communications and surveillance radar. Many of FAA's systems in support of air traffic control provide extraordinary reliability, and the existing single-thread telecommunications arrangement is often the weak link which causes serious operational outages. Deployment of the satellite back-up project will remedy this situation. This project will take a systems approach to the satellite communications needs of the FAA and provide satellite installations for a variety of applications where satellites are the best choice.

SENATOR LAUTENBERG: What analysis has been done to show the cost-effectiveness of this project?

ANSWER: As part of the analysis associated with developing FAA's first Telecommunications Strategic Plan (now in draft form), the cost-effectiveness of satellite communications was studied. The general conclusion was that for applications where satellites make operational and commercial sense (such as back-up communications, broadcast applications and service to remote areas), they are the most cost-effective alternative available. In particular, in order to provide physically diverse service to the remote areas where many of FAA's facilities are located, the only alternative to satellites would be extremely costly special construction of special cable or microwave routes.

SENATOR LAUTENBERG: How did FAA determine that satellite service can meet its operational requirements?

ANSWER: In assessing the degree to which satellite service can meet its operational requirements, FAA looked at several things. First, we have extensive experience in some areas of the country, such as Alaska and the Caribbean, where satellites are used because they are the only telecommunications service available. Second, we have installed pilot satellite services in several locations where there were special telecommunications needs or problems -- such as unacceptable performance from the available terrestrial telecommunications. In addition, we conducted a simulation and analysis at the FAA Technical Center to establish the circumstances under which satellite service can meet our operational needs. The conclusion of these efforts is that there are many applications, including communications back-up, for which satellite services are the best choice.

SENATOR LAUTENBERG: Has FAA developed a comprehensive plan for satellite usage as part of its overall communications planning? If so, please describe the highlights of this plan.

ANSWER: The FAA is currently engaged in developing a comprehensive plan for satellite usage, through such means as a Satellite Working Group and network planning and engineering efforts within our Telecommunications Management and Operations and Systems Engineering organizations. Highlights of this plan will include the following:

- the FAA will consolidate its satellite communications requirements using a systems perspective, to avoid proliferation of satellite dishes, equipment and contracts;

- satellites will play a major role in providing back-up communications and eliminating serious weak links in our operational services;

- satellite service is clearly superior for selected applications such as the broadcasting of data and the establishment of temporary links; and

- in some areas (such as Alaska) satellite service is the key technology for satisfying telecommunications requirements.

OCEANIC DISPLAY AND PLANNING SYSTEMS (ODAPS)

SENATOR LAUTENBERG: Why have cost growth and schedule slippage occurred in the ODAPS project?

ANSWER: Cost growth and schedule slippage have occurred in the ODAPS project due to the following: (1) the original development effort was delayed and increased cost growth due to delays in receiving the re-hosted NAS monitor (operating system) from the Host Computer System (HCS), to errors in GFE provided to the contractor, and to underestimation by the contractors as to testing complexity; (2) the direction not to initially procure a support/development system for the FAA Technical Center and use Oakland as the key site/shakedown test location added cost and schedule impact; (3) the redirection effort of the Air Traffic community as to requiring new or added functions to the approved system added cost and schedule growth.

SENATOR LAUTENBERG: What actions has FAA taken to insure that further project delays will be minimized? Please specify what agency actions have been directed to the program office, the contracts division, and the contractor.

ANSWER: The FAA has taken the following steps to insure that further project delays will be minimized: (1) A support/development ODAPS system has been procured and installed at the FAA Technical Center. This action was directed to the contractor and implemented by the program office. (2) The incorporation of the FAA Technical system will allow for the through testing of new requirements prior to field release. (3) The shakedown, training and cutover of the New York system has been presented and agreed upon by the facility personnel.

SENATOR LAUTENBERG: Is the Oakland ODAPS meeting operational needs? If not, what enhancements/improvements are being made?

ANSWER: The Oakland ODAPS is meeting operational readiness demonstration (ORD) needs on a limited basis. This limited basis is from the lack of use of the conflict probe function which will be remedied by installation of the Air Traffic changes to the system.

SENATOR LAUTENBERG: When will ODAPS become operational at New York?

ANSWER: ODAPS is scheduled to become operational in the Initial Operation Capacity (IOC) in April 1991. This activity will take place following training and site testing of this system.

SENATOR LAUTENBERG: We understand that there may not have been any research and development effort before ODAPS went into production. Would operational requirements have been better defined if a developmental system had been built first? Would this have alleviated production problems?

ANSWER: The ODAPS would have resulted in a smooth transition if an R&D effort was accomplished. The scope of the revision to operational requirements of a method of air traffic control from a totally manual system to an automated system was not able to be envisioned strictly on a paper design effort. Production problems in the testing and new requirements area would have been reduced, and other factors, such as delay of NAS monitor and GFE errors would have been received as the system development progressed. Underestimation of testing time would have been reduced by expensive of the contractors and firm requirements.

VOR/DME REQUEST

SENATOR LAUTENBERG: Provide site information, estimated delivery date and operational date of the VOR/DME facilities and TACAN antennas covered by the 1991 request.

ANSWER: The site information follows:

LOW POWER TACAN ANTENNAS

	LOCATION	ST	ESTIMATED DELIVERY DATE	ESTIMATED OPERATIONAL DATE
1.	COLD BAY	AK	7/93	8/93
2.	KING SALMON	AK	7/93	8/93
3.	SISTER ISLAND	AK	7/93	8/93
4.	YAKUTAT	AK	7/93	8/93

5.	BUTLER	MO	7/93	8/93
6.	BURLINGTON	IA	7/93	8/93
7.	CEDAR RAPIDS	IA	8/93	9/93
8.	DES MOINES	IA	8/93	9/93
9.	DOGWOOD	MO	8/93	9/93
10.	FORT DODGE	IA	8/93	9/93
11.	GOODLAND	KS	8/93	9/93
12.	HILL CITY	KS	8/93	9/93
13.	IOWA CITY	IA	9/93	10/93
14.	LINCOLN	NE	9/93	10/93
15.	OMAHA	NE	9/93	10/93
16.	SALINA	KS	9/93	10/93
17.	SIOUX CITY	IA	9/93	10/93
18.	CALVERTON	NY	9/93	10/93
19.	DEER PARK	NY	10/93	11/93
20.	ERIE	PA	10/93	11/93
21.	LAKE HENRY	PA	10/93	11/93
22.	TIDIOUTE	PA	10/93	11/93
23.	DARWIN	MN	10/93	11/93
24.	IRONWOOD	MI	10/93	11/93
25.	JANESVILLE	WI	11/93	12/93
26.	JEFFERSON	OH	11/93	12/93
27.	LANSING	MI	11/93	12/93
28.	LITCHFIELD	MI	11/93	12/93
29.	MADISON	WI	11/93	12/93
30.	MANSFIELD	OH	11/93	12/93
31.	MOLINE	IL	12/93	1/94
32.	MUSKEGON	MI	12/93	1/94
33.	SAGINAW	MI	12/93	1/94
34.	WILLISTON	ND	12/94	1/94
35.	GARDNER	MA	12/94	1/94
36.	MANCHESTER	NH	12/93	1/94
37.	CHEROKEE	WY	1/94	2/94
38.	DOUGLAS	WY	1/94	2/94
39.	NEAH BAY	WA	1/94	2/94
40.	PENDLETON	OR	1/94	2/94
41.	SEATTLE	WA	1/94	2/94
42.	YAKIMA	WA	1/94	2/94
43.	JACKSONVILLE	FL	2/94	3/94
44.	KEY WEST	FL	2/94	3/94
45.	LAKELAND	FL	2/94	3/94
46.	MIAMI	FL	2/94	3/94
47.	TAYLOR	FL	2/94	3/94
48.	W PALM BEACH	FL	2/94	3/94
49.	WHITE CLOUD	MS	3/94	4/94
50.	WILMINGTON	NC	3/94	4/94
51.	BLUE RIDGE	TX	3/94	4/94
52.	BORGER	TX	3/94	4/94
53.	DALHART	TX	3/94	4/94
54.	MIDLAND	TX	3/94	4/94
55.	SCURRY	TX	4/94	5/94
56.	FELLOWS	CA	4/94	5/94
57.	GOFFS	CA	4/94	5/94
58.	GORMAN	CA	4/94	5/94
59.	MINA	NV	4/94	5/94
60.	MORMON SEA	CA	4/94	5/94
61.	NIMITZ	GU	5/94	6/94
62.	PAGO PAGO	AS	5/94	6/94
63.	WILSON CREEK	NV	5/94	6/94
64.	BIG SPRING	TX	5/94	6/94
65.	AUSTIN	TX	5/94	6/94
66.	BISCAYNE	FL	5/94	6/94

67.	NABB	IN	6/94	7/94
68.	GULFPORT	MS	6/94	7/94
69.	NORTH PLATTE	NE	6/94	7/94
70.	LUCIN	UT	6/94	7/94
71.	HARRISBURG	PA	6/94	7/94
72.	PUEBLO	CO	6/94	7/94
73.	LINDEN	VA	7/94	8/94
74.	HOPEWELL	VA	7/94	8/94
75.	COLORADO SPRINGS	CO	7/94	8/94
76.	MAPLES	MO	7/94	8/94
77.	KOKOMO	IN	7/94	8/94
78.	POGGI	CA	7/94	8/94
79.	HENDERSON	WV	8/94	9/94
80.	EATON	MS	8/94	9/94
81.	ALBANY	NY	8/94	9/94
82.	MILFORD	UT	8/94	9/94
83.	KINGSTON	NY	8/94	9/94
84.	MAXWELL	CA	8/94	9/94
85.	LAWRENCEVILLE	VA	9/94	10/94
86.	MILTON	PA	9/94	10/94
87.	RICHMOND	IN	9/94	10/94
88.	TOBE	CO	9/94	10/94
89.	PAWLING	NY	9/94	10/94
90.	HAMILTON	AL	9/94	10/94
91.	MUSCLE SHOALS	AL	10/94	11/94
92.	HUNTSVILLE	AL	10/94	11/94
93.	BELLAIRE	OH	10/94	11/94
94.	ROSWELL	NM	10/94	11/94
95.	WHITE CLOUD	MI	10/94	11/94
96.	WILMINGTON	NC	10/94	11/94
97.	MORGAN MESA	CA	11/94	12/94
98.	EAU CLAIRE	WI	11/94	12/94
99.	PAHOKEE	FL	11/94	12/94
100.	WILKES-BARRE	PA	11/94	12/94
101.	MYRTLE BEACH	SC	11/94	12/94
102.	PORTEVILLE	CA	11/94	12/94
103.	FAA ACADEMY	OK	12/94	1/95

DME

1.	ALTOONA	PA	5/93	6/93
2.	CLARKSBURG	VA	5/93	6/93
3.	ALLEN CO	OH	5/93	6/93
4.	BLOOMINGTON	IL	5/93	6/93
5.	BURLINGTON	WI	5/93	6/93
6.	ALLENDALE	SC	5/93	6/93
7.	CECIL	FL	6/93	7/93
8.	CLARKSVILLE	TN	6/93	7/93
9.	DANVILLE	VA	6/93	7/93
10.	DELANCEY	NY	6/93	7/93
11.	CIRCLEVILLE	OH	6/93	7/93
12.	GALESBURG	IL	6/93	7/93
13.	GRAND RAPIDS	MI	7/93	8/93
14.	ELIZABETH CITY	NC	7/93	8/93
15.	FRANKFORT	KY	7/93	8/93
16.	FULTON COUNTY	GA	7/93	8/93
17.	FRANKLIN	PA	7/93	8/93
18.	FREDRICK	MD	7/93	8/93
19.	GRANTSBURG	WI	8/93	9/93
20.	JACKSONVILLE	FL	8/93	9/93
21.	KANKAKEE	IL	8/93	9/93
22.	JACKSON	TN	8/93	9/93
23.	LAUREL	MS	8/93	9/93

24.	MELBOURNE	FL	8/93	9/93
25.	HAGERSTOWN	MD	9/93	10/93
26.	HAZELTON	PA	9/93	10/93
27.	KENOSHA	WI	9/93	10/93
28.	LACROSSE	WI	9/93	10/93
29.	SHEBOYGAN	WI	9/93	10/93
30.	MT. VERNON	FL	9/93	10/93
31.	NATCHEZ	MS	10/93	11/93
32.	NEW BERN	NC	10/93	11/93
33.	MONTEBELLO	VA	10/93	11/93
34.	N.PHILADELPHIA	PA	10/93	11/93
35.	WEST BEND	WI	10/93	11/93
36.	WOLF LAKE	IN	10/93	11/93
37.	YANKTON	SD	11/93	12/93
38.	POMPANO BEACH	FL	11/93	12/93
39.	SAUFLEY	FL	11/93	12/93
40.	TUPELO	MS	11/93	12/93

In addition to the above, the FY 1991 request includes funds for other navigation systems improvements as follows:

- Convert VOR to high altitude facility: College Station, TX; Waterloo, IA; Industry, TX; Lafayette, LA

- Establish/add DME to VOR: Alice, TX; Stinson Field, TX

- Establish VOR test signal: Harrisburg, PA

- In service engineering support

NAVIGATIONAL AID

SENATOR LAUTENBERG: List the 39 sites to receive the runway-end identification lights (REIL), and the 36 sites to receive the precision approach path indicators. Include estimated installation dates and cost per site.

ANSWER: The site list follows:

REIL

LOCATION	COST	LOCATION	COST
Tucson, AZ	201,600	Medina, OH	164,900
Santa Monica, CA	186,600	Ravenna, OH	164,900
Lewiston, ID	172,500	Willoughby, OH	164,900
Frankfort, IL	164,900	Lancaster, PA	176,500
Lawrence, MA	206,700	Pittsburgh, PA	173,500
Clinton, MD	176,500	Somerset, PA	176,500
Norridewock, ME	218,200	Amarillo, TX (2)	327,000
Wiscasset, ME	204,700	Falfurrias, TX	188,500
Grand Rapids, MI	164,900	San Angelo, TX	188,500
S. St. Paul, MN	161,900	San Antonio, TX (2)	193,500
St. Louis, MO (2)	316,000	Sulphur Springs, TX	188,500
Great Falls, MT	172,500	Burlington, VT	206,700
Helena, MT	172,500	Auburn, WA	172,500
Manchester, NH	206,700	Moses Lake, WA	172,500
Belmar, NJ	116,500	Olympia, WA	172,500
Linden, NJ	176,500	Omak, WA	172,500

Albuqurque, NM	188,500	Seattle, WA	172,500
Elyria, OH	164,900	Burlington, WI	164,900

It is estimated the installation for all sites will be completed by the fourth quarter of 1993.

PAPI

LOCATION	COST	LOCATION	COST
Ontario, CA	205,400	Pontiac, MI	201,900
Santa Monica, CA	281,900	South ST Paul, MN	183,100
Jacksonville, FL	185,800	ST Louis, MO (2)	352,800
W. Palm Beach, FL	185,800	Pascagoula, MS	180,500
Columbus, GA	185,800	Monroe, NC	180,500
Peachtree City,GA	180,500	Berlin, NH	295,200
Council Bluff, !A	176,400	Nashua, NH	289,600
Jerome, ID	181,300	Defiance, OH	183,100
Salmon, ID	181,300	Elyria, OH	183,100
Dupage, IL	183,100	Sandusky, OH	183,100
Lawrenceville, IL	183,100	Memphis, TN	185,800
Romeoville, IL	183,100	Burnet, TX	206,500
Goshen, IN	183,100	Clenburne, TX	206,500
Lawrence, MA (2)	584,800	Snyder, TX	206,500
Manchester, MA	289,600	Terrell, TX	206,500
Frenchville, ME	306,300	Wendover, UT	181,300
Wicasset, ME	306,300	Pasco, WA	181,300

It is estimated the installation for all sites will be completed by the fourth quarter of 1993.

DENVER AIRPORT

SENATOR LAUTENBERG: How was this year's request of $60 million for Denver determined?

ANSWER: The request is based on an item-by-item review of all activities, and their related costs, on the FAA's implementation schedule. The dates on the FAA schedule are tied to the sponsor's scheduled milestones to open the New Denver Airport in October 1993. The following answer provides a detailed list of the individual projects and their costs.

SENATOR LAUTENBERG: What systems (at which price) does it cover?

ANSWER: The breakdown of the $60 million request for Denver Airport follows:

FY 1991 F&E BUDGET REQUEST

	TOTAL
Approach Light Systems (ALSF-II)	$5,650,000
Airport Surface Detection Equipment	1,610,000
Airport Surveillance Radar (ASR)	4,106,000
Airport Traffic Control Tower (ATCT)	2,493,000
Airport Cable Loop	8,900,000
Category I Instrument Landing System	1,456,000
Category III Instrument Landing System	3,240,000
Medium Intensity Approach Light System	3,290,000

Precision Approach Path Indicator (PAPI)	1,760,000
Remote Communication Facilities (RCF)	3,430,000
Remote Maintenance Monitoring (RMM) Systems	1,022,000
Runway Visual Range (RVR)	1,350,000
Terminal Radar Approach Control (TRACON)	10,107,000
Very High Frequency Omni-directional Range	1,746,000
Front Range Satellite ATCT	3,000,000
Low Level Windshear Advisory System (LLWAS)	1,948,000
Distance Measuring Equipment (DMEL)	900,000
Air Traffic Control Telecomm.	437,000
Relocate Remote Communications Link (RCL)	205,000
ICSS Equipment	2,850,000
Television Microwave Link (TML)	500,000
TOTAL	$60,000,000

SENATOR LAUTENBERG: Provide the estimated F&E requests associated with Denver by year of request.

ANSWER: The estimated F&E request for Denver Airport follows:

Funding Estimates: (in millions of dollars)

FY 1989	FY 1990	FY 1991	FY 1992	TOTAL
$4.0	$39.4	$60.0	$62.1	$165.5

AIRPORT CAPACITY

SENATOR LAUTENBERG: Please update the listing of airports currently experiencing capacity problems and those with projected capacity problems by the year 2000.

ANSWER: The attached list from the 1990 System Capacity Enhancement Plan (which will be released in September) indicates that 21 airports experienced annual aircraft delays of 20,000 hours or more in 1988 (the latest year for which such information is available). By the year 1998, that number is expected to grow to 41 airports, assuming that none of the capacity enhancements recommended in the Plan are implemented.

SENATOR LAUTENBERG: You are proposing a $351 million letter of intent (LOI) for the new Denver International Airport. Your request refers to another $2 to $3 billion in potential LOI demands. What are the larger LOI requests that you have received or expect to receive?

ANSWER: The listing follows:

Location	Amount	Request Rec'd
Detroit Metropolitan	$ 185 million	Y
Washington Dulles/Nat'l	270 million	Y
Orlando	28 million	Y
Philadelphia	122 million	N
Burbank, CA	38 million	N
Louisville KY	300 million	N
St. Louis Lambert	350 million	N
N.Y./N.J. Port Authority	1000 million	Y
NE Illinois/NW Indiana	500 million	N
Pittsburgh	33 million	Y
Memphis	110 million	N

SENATOR LAUTENBERG: Please provide a complete list of your $2 to $3 billion in potential LOI demands indicating whether the request has been received.

ANSWER: See the above answer.

SENATOR LAUTENBERG: As is stated in the letter, the demand exceeds funds available. If the Denver LOI were to be issued, which of these other requests and potential requests would not receive an LOI?

ANSWER: We will consider all high priority needs and will approve funding for those projects to the extent available. Some locations may not receive the entire amounts requested, however, all reasonable funding options will be considered.

SENATOR LAUTENBERG: According to your information, you currently have outstanding letters of intent for primary airports amounting to nearly $70 million in fiscal year 1991 funds, of which $41.44 million is discretionary funding. Under your proposal, Denver would receive $25 million in discretionary funds. Under your proposed fiscal year 1991 budget, what amount of discretionary funds would be available for capacity improvements at primary airports?

ANSWER: Under the 1991 budget, $195.8 million in discretionary funds would be available for this purpose.

SENATOR LAUTENBERG: How much would be available for this purpose if your $100 million capacity set-aside is not approved?

ANSWER: The amount available would be $142.3 million.

SENATOR LAUTENBERG: Am I correct that, over the past 5 fiscal years, less than 50 percent of your primary airport discretionary funds went to large hub airports?

ANSWER: Yes, you are correct. Large hub primary airports have received approximately 40 percent of the primary discretionary funds for fiscal years 1985 through 1989.

SENATOR LAUTENBERG: In your budget justification, you show a $120 million carryover from formula grants. How are these funds distributed?

ANSWER: These funds are designated to the original airport sponsor or state for a period of three years. Therefore, the funds must be held until the sponsor or state files an application for the funds. If the use of the formula funds is waived or carried over for another year, then we would move the funds for discretionary use. According to our established procedure, 75 percent would be designated for capacity projects and 25 percent, for other discretionary use.

SENATOR LAUTENBERG: Last year, your policy was to limit letters of intent to 50 percent of your total capacity, safety, security, and noise discretionary funds. Is that still your policy? If so, how much is that in fiscal year 1991?

ANSWER: Yes. In fiscal year 1991, that amount would be $98 million.

LAND PROCUREMENT

SENATOR LAUTENBERG: Breakdown the request for $3 million by site.

ANSWER: Following is the breakdown.

FISCAL YEAR 1991 PLANNED LAND ACQUISITIONS

CITY/STATE	FACILITY	NUMBER OF ACRES	COST PER ACRE	TOTAL COST
ALABAMA				
Birmingham	H/OM	0.6	$50,000	$30,000
ARKANSAS				
Little Rock	OM	0.2	$225,000	$45,000
Little Rock	RTR	1.5	$50,000	$75,000
Pine Bluff	VORTAC	75	$1,000	$75,000
ARIZONA				
Prescott	DF	3	$33,333	$100,000
CALIFORNIA				
Carlsbad	OM	0.3	$250,000	$75,000
San Luis Ob.	VORTAC	40	$1,250	$50,000
FLORIDA				
Brooksville	RCAG	1.3	$15,000	$19,500
Crestview	RCAG	1.3	$15,000	$19,500
GEORGIA				
Augusta	RCAG	1.3	$15,000	$19,500
Columbus	RCAG	1.3	$15,000	$19,500
Rome	H	1.3	$15,000	$19,500
Vienna	VORTAC	254.1	$1,023	$260,000
ILLINOIS				
Springfield	OM	0.2	$105,000	$21,000
IOWA				
Davenport	VORTAC	73.8	$813	$60,000
KANSAS				
Anthony	VORTAC	73	$411	$30,000
Macksville	ARSR	5	$13,400	$67,000
KENTUCKY				
Bowling Grn	VORTAC	52.1	$6,622	$345,000
Jonesville	RMLR	5	$15,200	$76,000
LOUISIANA				
Lake Charles	OM	1	$33,000	$33,000

CITY/STATE	FACILITY	NUMBER OF ACRES	COST PER ACRE	TOTAL COST
MICHIGAN				
Romulus	MM	0.22	$227,273	$50,000
MISSOURI				
Kansas City	OM	0.2	$125,000	$25,000
Kirksville				$30,000
NEW HAMPSHIRE				
Berlin	VOR	77	$974	$75,000
NEW MEXICO				
Deming	RMLR	1.5	$13,333	$20,000
Double Eagle II	OM	0.3	$110,000	$33,000
Fort Craig	RMLR	1.5	$8,667	$13,000
NEW YORK				
Watertown	VORTAC	45	$4,178	$188,000
Wellsville	VORTAC	45	$1,222	$55,000
OHIO				
Middletown	RCL	0.22	$181,818	$40,000
Oberlin	ARTCC	5	$24,000	$120,000
Woodville	RCL	0.23	$152,174	35000
TENNESSEE				
Tri-City	OM	1.8	$17,222	$31,000
TEXAS				
Amarillo	RCL	1.7	$20,588	$35,000
Caldwell	RMLR	1.5	$16,667	$25,000
Llano	VORTAC	55	$1,818	$100,000
Midland	ASR	3	$8,000	$24,000
Stonewall	VORTAC	80	$1,500	$120,000
Tuscola	VOR	80	$975	$78,000
Wichita Falls	RCAG	12.7	$3,937	$50,000
VIRGINIA				
Chantilly	OM	0.2	$600,000	$120,000
WISCONSIN				
Eau Claire	VORTAC	42.8	$1,636	$70,000
				$2,776,500
ALG *				$223,500
Total Program				$3,000,000

SYSTEM ENGINEERING AND SUPPORT

SENATOR LAUTENBERG: Please detail the use of the fiscal year 1989 and 1990 funding between basic contract costs and aware fees. What is the breakdown assumed for 1991?

ANSWER: The breakdown follows:

Year	Contract Cost	Award Fee	Total
FY 1989	$106,042,900	$9,627,771	$115,670,671
FY 1990	115,030,000	11,390,000	126,420,000
FY 1991	103,700,000	10,400,000	114,100,000

SENATOR LAUTENBERG: For the past several years, the system contractor has received approximately 70 percent of the allowable award fee. Breakout the award fees by year since the start of the contract and reason for award for each year.

ANSWER: The System Engineering and Integration (SEI) contract permits an award fee to be paid for each 6-month period as a means to motivate the contractor's performance under the Cost-Plus-Award-Fee contract. The amount of the award fee is determined by a highly detailed process described in the SEI Performance Evaluation Plan that involves Performance Monitors, Evaluation Coordinators, Performance Evaluation Board members, Associate Administrators, and a Fee Determining Official. Breakout of the award fees paid to the SEI contractor since contract award is as follows:

Award Period	Award Fee Pool	Amount Awarded	Percent Awarded
1. February 1984 to July 1984	$1,391,655	$1,078,532	77.5%
2. August 1984 to January 1985	2,097,138	1,727,810	82.4%
3. February 1985 to July 1985	3,310,534	2,421,494	73.1%
4. August 1985 to January 1986	4,379,694	3,294,861	75.2%
5. February 1986 to July 1986	5,131,049	3,741,831	72.9%
6. August 1986 to January 1987	5,818,663	4,055,891	69.7%
7. February 1987 to July 1987	6,706,778	5,086,225	75.8%
8. August 1987 to January 1988	6,935,242	5,135,335	74.0%
9. February 1988 to July 1988	7,422,472	5,528,021	74.5%
10. August 1988 to January 1989	7,257,207	5,289,055	72.9%
11. February 1989 to July 1989	5,708,837	4,338,716	76.0%
12. August 1989 to January 1990	5,632,282	4,505,825	80.0%

SENATOR LAUTENBERG: For fiscal years 1983 through 1988, all the appropriated funds were obligated for the SEI activity. In 1989, $1.9 million was unobligated, and for 1990, you are estimating that $16.4 million will remain unobligated. Why are there unobligated funds in this account?

ANSWER: As of April 30, 1990, $.9 million of fiscal year 1989 and $11.0 million of fiscal year 1990 appropriated funds remain unobligated. All of these funds are committed and will be obligated for the SEI activity by the end of fiscal year 1990.

SENATOR LAUTENBERG: What are the plans for the unobligated funds?

ANSWER: The funds will be obligated for the SEI activity by the end of fiscal year 1990.

SENATOR LAUTENBERG: Breakout the amounts by contractor for this project in fiscal years 1989, 1990, and 1991.

ANSWER: The breakout follows:

FY 1989

	COST	AWARD FEE	TOTAL
Martin Marietta	$106,042,900	$ 9,627,771	$115,670,671
(Figures above include SEI Subcontractors as detailed below)			
ARINC	9,216,852	726,349	9,943,201
Advanced Systems Technologies,Inc.	524,568	--------	524,568
BTG, Inc.	2,724,247	225,383	2,949,630
James W. Collins & Associates	165,993	--------	165,993
Engineering & Economics Research, Inc.	1,787,243	--------	1,787,243
Logicon, Inc.	6,445,019	1,178,904	7,623,923
The Ralph M. Parsons Company	14,314,593	533,981	14,848,574
SOHAR, Inc.	253,659	---------	253,659
Stanford Telecommunications, Inc.	3,685,958	532,866	4,218,824
Systems Control Technoloy, Inc.	3,776,495	351,660	4,128,155
Systems Requirements & Service Assoc.	1,899,297	-------	1,899,297
Other	148,438	-------	148,438

FY 1990

	COST	AWARD FEE	TOTAL
Martin Marietta	$115,030,000	$11,390,000	$126,420,000
(Figures above include SEI Subcontractors as detailed below)			
ARINC	8,600,000	700,000	9,300,000
Advanced Systems Technologies,Inc.	600,000	--------	600,000
BTG, Inc.	2,600,000	200,000	2,800,000
Engineering & Economics Research, Inc.	2,200,000	------	2,200,000
Logicon, Inc.	8,800,000	800,000	9,600,000
The Ralph M. Parsons Company	20,100,000	1,700,000	21,800,000
SOHAR, Inc.	300,000	--------	300,000
Stanford Telecommunications, Inc.	3,900,000	300,000	4,200,000
Systems Control Technoloy, Inc.	4,100,000	400,000	4,500,000
Systems Requirements & Service Assoc. Inc.	2,100,000	--------	2,100,000

FY 1991

	COST	AWARD FEE	TOTAL
Martin Marietta	$103,700,000	$10,400,000	$114,100,000
(Figures above include SEI Subcontractors as detailed below)			
ARINC	7,800,000	600,000	8,400,000
Advanced Systems Technologies,Inc.	500,000	-------	500,000
BTG, Inc.	2,600,000	200,000	2,800,000
Engineering & Economics Research, Inc.	1,900,000	--------	1,900,000
Logicon, Inc.	8,600,000	700,000	9,300,000
The Ralph M. Parsons Company	21,100,000	1,900,000	23,000,000
SOHAR, Inc.	200,000	--------	200,000
Stanford Telecommunications, Inc.	3,700,000	300,000	4,000,000
Systems Control Technoloy, Inc.	4,200,000	400,000	4,600,000
Systems Requirements & Service Assoc. Inc.	1,800,000	--------	1,800,000

ADVANCED DESIGN AND MANAGEMENT CONTROL

SENATOR LAUTENBERG: List the contractors and amounts awarded in the advanced design and management control activity.

ANSWER: The FAA awarded a contract to the Small Business Administration (SBA) with Metters Industries, Inc. as the 8(a) subcontractor on April 9, 1990. The contract was for technical, engineering and management oversight support for the National Airspace System Plan. The estimated cost is $2,738,831 and the fixed fee is $241,017 for a total estimated amount of $2,979,848. Work for the contractor will be assigned on a task order basis. The period of performance is from the date of contract award through August 31, 1991. As of May 23, 1990, the contractor had been authorized only one small planning task in the amount not to exceed $10,000.

The Advanced Design and Management Control Service was abolished during the recent FAA organizational restructuring. The responsibility for this contract now resides with the Director, Office of Acquisition Policy and Oversight, ACQ-1.

FAA awarded a contract to SBA with National Systems and Research as a subcontractor on 9/29/89. The contract is for research, development, and engineering oversight of FAA programs. The estimated cost of this labor hour contract is $2,499,069, which includes fees. The period of performance is 18 months. Three work orders totalling $349,360 have been issued through May 23, 1990. The responsibility for this work has been transferred to the Director for Research and Development, ARD-1.

Additional support contracts have been awarded to support the independent operational test and evaluation oversight functions. Two cost-type contracts have been awarded to Synetics, Inc. for $2,794,985. To date $1,158,842 has been obligated on these two contracts. Three other contracts have been awarded to Computer Resource Management, Inc. in the amount of $2,614,890. To date $1,843,396 have been obligated. The responsibility for this contract now resides with the Director, Office of Independent Operational Test and Evaluation Oversight, ATQ-1.

HAZARDOUS MATERIALS MANAGEMENT

SENATOR LAUTENBERG: At which facilities will the FAA begin hazardous materials cleanup in 1991 if appropriated the sum requested?

ANSWER: The FAA anticipates hazardous waste cleanup measures to commence or to continue at the following regional locations during FY 1991.

- FAA Technical Center, Atlantic City, NJ - Cleanup of groundwater and soil contamination at various locations on the center grounds. The center has been nominated for placement on the National Priorities List with final selection expected in the summer of 1990.
- Alaskan Region - Over 50 sites are scheduled for preliminary assessments/site investigations over the next two years in Alaska. Based on the results of these studies required cleanups will commence in a timely fashion.

SENATOR LAUTENBERG: At what sites has FAA already started a completed cleanup?

ANSWER: The FAA has initiated cleanup action within the Alaskan region, the FAA Technical Center in New Jersey, the FAA Aeronautical Center in Oklahoma, and at various facilities around the country. The majority of completed projects are associated with minor spills and/or disposal of hazardous materials.

Major cleanups are scheduled to begin during FY 1991 in the Alaskan Region and the FAA Technical Center as soon as preliminary studies and remedial design work are completed.

NAS MANAGEMENT AUTOMATION PROGRAM

SENATOR LAUTENBERG: Approximately $16.2 million has been provided under automated command and control technology for automating NAS plan related data. What have we gotten for that money?

ANSWER: The $16.2 million in funding is being used to fund the procurement of workstations and associated technical support services. The OATS contract was awarded in December 1989 and is the agency's primary mechanism for acquiring automation hardware and software. In accordance with the Administrator's policy the AAF community has committed to using the OATS technology to support the NAS Management Automation Program (NASMAP) program. The NASMAP is a project to facilitate the planning, scheduling, and tracking of all airway facilities activities via an automation network. The program will consolidate and interface information requirements and allow the information to be generated in a more timely and efficient manner for all NAS planning personnel. A breakout of how the funds are planned to be used is presented below:

Activity:	Amount (millions)
Procurement of workstations	$11.0
NASMAP configuration/data analysis	2.4
LAN analysis/configuration	1.8
Training and Maintenance	1.0
Total	$16.2

SENATOR LAUTENBERG: What types of data are required by the NAS plan and why will it cost $14.2 million in FY 1991 and another $40.8 million in future requirements?

ANSWER: The funds requested in FY 1991 are necessary to acquire workstations for NAS personnel and establish the network and communications links to permit FAA personnel to collect, manipulate, and report the information needed to efficiently and effectively manage the NAS facilities.

The $40.8 million represents the additional funding needed to complete the NASMAP effort. The NASMAP program is made up of workstations for field personnel at the region, sector, and sector field office level. Additionally, the NASMAP program includes the necessary tools to allow the information collected at this level to be used in the management decisionmaking process. This requires the establishment and installation of LANs, communications, hardware/software, training, and maintenance at each level. The $40.8 million represents the cost of providing this set of essential tools to the NAS facilities personnel to perform the job required in today's environment.

SENATOR LAUTENBERG: What are the adverse consequences of not receiving the total amount requested?

ANSWER: The impact of not providing the funding is that the NAS facilities personnel will continue to use the tools and techniques developed in the 1960's to manage systems based in the 1990's. We will continue to attempt to provide the required information and data through manual processes to management. Our personnel will have to spend additional manual labor to obtain information which should be readily available in an automated environment.

The impact of this manual process is that it requires significant longer periods of time to collect the data needed by management to make decisions. Realistically, in some cases, we will be forced to make decisions without all the relevant information. In some cases not enough time will be available to assemble, condense and organize the data. Informed management decisions will be the exception rather than the rule. our community will be unable to collect the necessary information expediently in order to enable employees to answer the questions posed by management.

LONG-RANGE INTERNATIONAL FLIGHT INSPECTION

SENATOR LAUTENBERG: You are requesting five long-range aircraft to replace the existing inspection aircraft. Why is a new aircraft needed in 1991?

ANSWER: The current fleet contains only one aircraft with long-range flight inspection capability, the Boeing B-727 at Honolulu. There is no backup long-range aircraft for the B-727.

The fuel limitations on the remaining international flight inspection aircraft, together with the constraints imposed by foreign air traffic control, require frequent fuel stops. Additionally, missions frequently need to circumvent areas of hostility which further exacerbates the problem of limited ranges.

Three of the aircraft assigned to the international mission are in excess of 20 years old and are becoming increasingly difficult to maintain. The Boeing 727, being 27 years old, qualifies as an "aging aircraft".

SENATOR LAUTENBERG: Since the needs assessment is not complete, how did you derive the request of $18.6 million?

ANSWER: The information follows:

o	Purchase Cost (market survey for typical used long-range aircraft)	$14,000,000
o	Training Cost (flight crews & maintenance)	200,000
o	Ground Support Equipment	600,000
o	Flight Inspection Retrofit	3,800,000

SENATOR LAUTENBERG: Since these aircraft are primarily in support of DOD functions, why shouldn't DOD pay for these aircraft, or use military aircraft?

ANSWER: Executive Order 11047, dated August 28, 1962, transferred "functions relating to flight inspection of air navigation facilities" from the DOD to the FAA.

The FAA implemented this order by signing a Memorandum of Agreement with the Air Force, Navy, and Army. In accordance with these agreements, the budgetary responsibility for FAA flight inspection activities is assumed by the FAA.

International flight inspection activities averages approximately 70 percent for Department of Defense and 30 percent for reimbursable amounts in support of Department of State initiatives.

SENATOR LAUTENBERG: Provide a report on how these five aircraft have been used the past two years (where stationed, number of flights, miles logged, places visited, et cetera).

ANSWER: Six aircraft are currently used in the international flight inspection program. The data is as follows:

Honolulu, Hawaii - 1 Boeing 727; 1 BE F-90
Tokyo, Japan - 2 Sabre-40's
Frankfurt, Germany - 2 Sabre-80's

o The number of flights is recorded in FY 1988 through the use of daily flight logs for flight itineraries. 827 daily flight logs were filed for the international program, and 928 were filed for FY 1989.

o The use of aircraft is reported in hours flown vs miles logged. The international aircraft flew 3,058 hours in FY 1988 and 3,435 hours in FY 1989.

o "Places visited" is accounted for in the aircraft log books of each individual aircraft assigned to the international program. During FY 1988, 46 countries were "visited" by international flight inspection aircraft for the purpose of inspection of navigational aids. The annual itinerary includes locations such as Hong Kong, Indonesia, Ireland, Italy, Jamaica, Maldives, Panama, Samoa, Singapore, St. Lucia, Grenada, Surinam, Trinidad, Tobago, Turks and Caicos Islands, Ascension Island, Azores, Bermuda, Canton, Diego Garcia, Johnston, Nepal, Iceland, Kwajalein, Okinawa, Greenland, Wake Island, Japan, Germany, Spain, Portugal, Jordan, Philippines, Turkey, and Oman.

SENATOR LAUTENBERG: Provide a description of each of the aircraft targeted for replacement, i.e., type of craft, range, payload, age.

ANSWER: The data is as follows:

AIRCRAFT TYPE	RANGE	MAXIMUM TAKEOFF WT.	AGE
(1) B-727	2,900 NM	160,000 LB	27 YRS
(1) BE-F90	928 NM	10,950 LB	9 YRS
(2) SABRE-80	1,344 NM	23,000 LB	16 YRS
(2) SABRE-40	1,186 NM	19,612 LB	22 YRS

SENATOR LAUTENBERG: Provide a similar description of all FAA aircraft with a description of each aircraft's mission.

ANSWER: The data is as follows:

AIRCRAFT TYPE	RANGE	MAX TO WEIGHT	AGE	MISSION
AC-1121 Jet Commander (1)	952	18,500	21	Training
AC-1121 Jet Commander (3)	952	18,500	21	Flt. Insp.
AC-680 Aero Commander (1)	1,980	7,500	32	R&D
B-727 Boeing 727-30 (1)	2,900	160,000	27	Flt. Insp.
B-727 Boeing 727-100QC (1)	2,500	169,600	22	R&D
BE-200 Super King Air (1)	1,680	12,500	15	R&D
BE-300 Beechcraft (19)	977	14,000	2	Flt. Insp.
BE-C90 Beechcraft (5)	800	9,650	10	ECT
BE-F90 Beechcraft (2)	928	10,950	9	Training
BE-F90 Beechcraft (2)	928	10,950	9	Flt. Insp.
C-500 Cessna (1)	936	11,500	17	ECT
C-550 Cessna (1)	2,080	13,300	12	ECT
CV-580 Convair (3)	1,632	54,600	33	R&D
CV-580 Convair (2)	1,632	54,600	33	Flt. Insp.
DC-3 Douglas (1)	1,120	26,900	45	Education
DC-9 Douglas (1)	1,473	90,700	24	Training
G-159 Grumman (1)	2,193	36,000	29	Training
G-159 Grumman (1)	2,193	36,000	25	ECT
G-IV Gulfstream (1)	4,220	73,200	2	ECT
L-1329 Lockheed (1)	2,000	40,921	27	Training
NA-265 Sabre-40 (3)	1,186	19,612	22	Flt. Insp.
NA-265 Sabre-40 (1)	1,186	19,612	22	Training
NA-265 Sabre-80 (7)	1,344	23,000	16	Flt. Insp.
SK-76 Sikorsky (1)	350	10,300	9	R&D
UH-1H Bell Helicopter (1)	250	9,500	20	R&D

SATELLITES

SENATOR LAUTENBERG: Does FAA agree that the system of the future is a hybrid space/earth system linking satellites with random routing technology such as LORAN C? What does FAA foresee as the likely timetable for implementation of such a system? Is FAA developing a comprehensive plan for transitioning to such a system?

ANSWER:

o The satellite applications program is aggressively developing civil aviation uses for satellite capability as a potential substitute for existing ground-based capabilities. Satellite navigation is a form of random routing technology. Potential results of this program include use of the satellites as a stand alone, or sole means system, as well as in conjunction with existing ground based systems such as Loran C.

o Initial applications of satellite systems for air-ground communications, navigation and surveillance will be in oceanic and in low altitude/offshore areas not well served by ground-based facilities.

o In the 2010 time frame, satellite systems may be used extensively for navigation (possibly, in lieu of VOR/DME) and may support surveillance and communications functions as well (in lieu of ground based facilities).

SENATOR LAUTENBERG: Does FAA foresee the need for Congressional action to obtain civil use of Global Positioning System(GPS)? If so, what would be the nature of the legislation?

ANSWER: FAA continues to work with DOD to insure that the DOD commitment to GPS is consistent with planned or potential civil applications. No requirement for legislation is foreseen.

SENATOR LAUTENBERG: Some user groups have suggested initial ocean satellite navigation service by 1995. Given that there is no equipment to be replaced for ocean navigation and the fact that the satellites will be in place by 1992, is that an unreasonable posture? What is FAA's schedule? Do you have a transition plan?

ANSWER: The user group suggestion is reasonable. The satellite system which could provide the service in that time frame is DOD's Global Positioning System. DOD plans to declare GPS operational and approved as a Federally-operated common use radionavigation system in 1993.

The FAA's schedule is tied to the DOD schedule. During 1993, FAA expects to approve GPS as a supplemental en route radionavigation system. Once this approval has been issued, an aircraft operator could select avionics to utilize it and transition from what he is currently using.

RESEARCH, ENGINEERING, AND DEVELOPMENT

TiltRotor Research

With the deletion in funding requested by Defense, it appears that the commercial version of the Boeing/Vertol V-22 Osprey has been dealt a fatal blow. RE&D funding has been used in anticipation of certification needs and vertiport procedure analysis.

SENATOR LAUTENBERG: Why is FAA continuing with its tilt-rotor work in RE&D when there is doubt as to the commercial availability of that technology in the near future?

ANSWER: Most current work will support conventional rotorcraft as well as tiltrotors, and is thus necessary whether a commercial version of the V-22 Osprey is fielded or not.

The Japanese Ishida Corporation-funded tiltwing, which is scheduled for production in Texas around 1993, has similar operational characteristics to tiltrotor and current tiltrotor research will also apply to tiltwing.

SENATOR LAUTENBERG: Secretary Skinner's National Transportation Policy speaks of the RE&D effort associated with the tilt-rotor. What specifically is FAA doing to make the tilt-rotor commercially viable, particularly in light of Defense's decision to cancel the V-22 program?

ANSWER: The FAA, along with NASA, is conducting a follow-on study of civil tiltrotor economics, missions, and applications; beginning independent economic analysis; and continuing AIP study grants for planning to determine civil tiltrotor cargo and passenger operational and economic feasibility. Per an existing Memorandum of Agreement, the FAA is coordinating with DOD to capture available aircraft development data necessary in civil certification process. Also, the FAA is planning for infrastructure that will accommodate tiltrotors, so operators will be able to utilize tiltrotor's unique operating characteristics if it proves economically viable and becomes commercially available.

SENATOR LAUTENBERG: How much has been expended by FAA on tiltrotor research, and how much is projected for FY 1991 through FY 1995?

ANSWER: The current budget projections for Vertical Flight R&D include specific Civil Tiltrotor (CTR) efforts as well as efforts in other areas which will benefit tiltrotor. The FAA is not funding the development of the Civil Tiltrotor, but is conducting research in support of the development of an infrastructure and certification standards to permit the operation of a civil variant when it is marketed by the manufacturers and operators. The following is a breakdown of expended and projected funding for CTR and rotorcraft combined:

	To Date	FY 1991-1995
CTR & Rotorcraft (combined)	29,435,000	33,071,000

AIRPORT SECURITY RESEARCH

SENATOR LAUTENBERG: You request $22.6 million for aviation security research. Specifically, how will this money be spent?

ANSWER: The $22.6 million request is for research and development in explosives detection. The planned allocation is $10.6 million for research, $7 million for deployment and evaluation of vapor detectors, and $5 million for the explosives detection laboratory.

A total of $3.8 million has been requested for other areas of aviation security research, such as weapons detection, airport security and systems integration.

SENATOR LAUTENBERG: How much will be used for TNA equipment? How much for vapor detection? How much for access control research?

ANSWER: Plans for the FY 1991 budget call for $500,000 to be allocated to product enhancement and sustaining engineering on the TNA and dual sensor systems. Vapor detection efforts will amount to $5 million for research and $7 million for deployment and evaluation of vapor detection systems. Funds for an access control study at Baltimore-Washington International Airport are included under the submission for the airport security project and total $150,000 in FY 1991.

SENATOR LAUTENBERG: Has FAA experienced problems field testing the products ~~of their~~ research? If so, please describe.

ANSWER: There have been problems in obtaining permission from airport authorities and airlines to test explosive detection devices with real explosives at airports. This situation occurred in the case of the TNA system located at JFK International Airport, for instance. To avoid such limitations, the FAA has developed and now utilizes explosive stimulants.

SENATOR LAUTENBERG: Would a prototype facility be advisable, so that FAA could field test equipment and/or procedures in a controlled environment?

ANSWER: Such a facility would be very advisable and, in fact, the explosives detection laboratory, for which funds have been requested in the FY 1991 submission, will have facilities for the testing of prototype explosive detection systems. Pending the completion of this laboratory, the FAA will continue to use the test facilities of other Federal laboratories such as Sandia and Idaho National Engineering Lab, Department of Energy.

SENATOR LAUTENBERG: Are you still planning to test your prototype explosive vapor detection system at Logan Airport this summer?

ANSWER: It has been suggested by the Presidential Commission, Office of Technology Assessment, and the National Academy of Science that the FAA have independent testing of prototype explosive detection systems before such equipment is deployed at airports for Operational Test and Evaluation.

Idaho Falls, a Department of Energy facility, has been selected for tests of vapor detection systems since they have the personnel and facilities to perform the evaluations.

SENATOR LAUTENBERG: Where will your explosives detection laboratory be located? What is the cost of establishing this laboratory, and to what extent are other agencies contributing to the cost of this laboratory?

ANSWER: The laboratory will be located at the Technical Center in Pomona, New Jersey. The approximate cost is $5 million for a fully equipped laboratory. No other agencies are contributing to its establishment.

SENATOR LAUTENBERG: What is the status of your evaluation of commercial X-ray screening systems that detect plastic and other nonconventional weapons?

ANSWER: A breadboard millimeter wave passenger screening system is being constructed which uses holographic imaging. It uses a linear array that can scan and process a passenger in less than 10 seconds. If something should appear suspect, further processing can be accomplished for higher resolution. The next step in this system will be to build and test a real-time scanning system. The linear scan system will be field tested in FY 1991.

Regarding commercial x-ray systems, a contract will be awarded to either a national laboratory or a private company to evaluate the capabilities of commercially available systems. Since the machines do not actually detect anything, but require the judgement of our operator, the evaluation will have to be somewhat subjective. One of the companies has claimed their system can, in fact, detect explosives. If negotiations are successful, they will be awarded a contract under the FY 1990 Broad Agency Announcement.

SENATOR LAUTENBERG: What are you currently testing at BWI Airport?

ANSWER: The testing program will include all aspects of the security program including access control, passenger baggage screening, passenger/baggage matching, and overall security communication systems. Initial installation of hardware will begin in early October. Some testing of component equipment is now being conducted at Sandia.

SENATOR LAUTENBERG: Does this system include measures beyond access control?

ANSWER: Yes, it included enhanced detection equipment, improved communication, access control enhancements, gate alert hardware and procedures, intrusion detection, training, law enforcement response, and passenger/baggage matching. The general intent is to screen everything that goes into the aircraft and to expand the sterile area to include the working ramp around the terminal.

SENATOR LAUTENBERG: What have you accomplished to date as a result of your research on hardening aircraft baggage holds against explosives?

ANSWER: Aircraft hardening entails looking at various materials and techniques that can be used to enhance the cargo containers. Structural integrity of the existing containers will be studied. Destructive testing on these containers will be done within the next fiscal year and an enhanced container will be constructed and tested. The goal of these tests is to make the containers capable of withstanding larger blasts, and to develop recommended specifications on future container designs.

The FAA is in the process of awarding a contract for research on hardening baggage containers to partially suppress blasts. The estimated time of award is late July.

AGING AIRCRAFT RESEARCH

SENATOR LAUTENBERG: The request for aging aircraft research also increases substantially by over 40 percent. What prompted this increase?

ANSWER: The technology necessary to provide an adequate level of confidence in the nondestructive inspection of aging aircraft has been greatly underestimated. Solution of the human factors aspects of inspection conduct have also been more complex and difficult to research than first indicated.

SENATOR LAUTENBERG: What specific actions (rulemakings, notices, change procedures) have been taken based on the aging aircraft research?

ANSWER: We have issued specific mandatory requirements to correct fatigue related difficulties on Boeing 727, 737, and 747 aircraft. We have proposed similar requirements for Douglas aircraft, and expect to make them mandatory this year. Similar requirements for all other makes of aircraft will be proposed in the next few months.

Similarly, corrosion control program changes have been proposed for Boeing fleets, and will soon be proposed for all other aircraft.

Flight Standards and Aircraft Certification inspectors are performing special surveillance and "aging aircraft audits" to insure that industry response to existing and proposed procedural changes is sufficient to continue to assure the safety of the fleet.

TRAFFIC ALERT AND COLLISION AVOIDANCE

SENATOR LAUTENBERG: You are requesting $10,576,000 for your TCAS (traffic alert and collision avoidance) research. When do you intend to make a decision on whether to undertake a TCAS-I source development and procurement (SDP) program?

ANSWER: The $10.576 million does not include TCAS I SDP. TCAS I LIP decision will be made later this month (Avion and Foster Air Data are competitors). The decision on SDP (pump priming) will be made after FAA gets results from the TCAS I LIP program in 1991.

SENATOR LAUTENBERG: What is the total estimated cost of your TCAS I limited installation program, and what would a SDP program cost?

ANSWER: The total estimated cost for a TCAS I limited installation program (LIP) is $2.8 million, and a source development program (SDP) would cost a total of $4 million.

SENATOR LAUTENBERG: The TCAS II limited installation program was modified to enhance the TCAS II units so that they can provide the capabilities of TCAS III operation. What is the status of this effort?

ANSWER: One manufacturer's TCAS II to TCAS III upgradability study is complete and substantiates technical feasibility of enhancing TCAS II units to TCAS III performance levels.

We are preparing a Request for Proposal to contract for the physical modification of a small number of production TCAS II units to a TCAS III configuration.

SENATOR LAUTENBERG: Last year, we were told that $18 million would be required to certificate TCAS III and conduct the limited installation testing program. How much will you allocate to this effort in fiscal years 1990 and 1991, and what is the projected completion date?

ANSWER: Within the FY 1990 appropriation and the FY 1991 request, we are allocating $1.9 million and $4.2 million, respectively, to complete the TCAS II development, certification and limited installation program (LIP). We are currently planning to complete the TCAS III LIP in 1993.

AIRWAY SCIENCE GRANTS

SENATOR LAUTENBERG: Last year, FAA indicated that it was reviewing the airway science grants program. You are preparing to delete bill language for this program. What did your review find?

ANSWER: To date, all appropriated funds have been initiated by Congress, accounting for $44 million in total funding. These funds have been obligated through 44 individual grants to 25 different institutions. The benefits of the program are long term. The funds help provide enhanced educational opportunities to many classes of aviation students through the use of state-of-the-art instructional facilities and equipment. These students enter into the professional work force within both FAA and the aviation industry. Fifty Airway Science graduates have entered the FAA and over 500 Airway Science graduates have entered the aviation industry. Over 3,000 students are presently enrolled in Airway Science training programs.

SENATOR LAUTENBERG: For the record, provide a listing of grants in this program (similar to the chart found on page 586 of the House hearings for FY 1990).

ANSWER: The information follows.

AIRWAY SCIENCE GRANT PROGRAM

Institution	Grant Status	Award $	Purpose[1]
U/North Dakota[2]	Awarded	$4,000,000	F/E
U/North Dakota[2]	Awarded	2,750,000	F/E
Hampton U	Awarded	2,250,000	F/E
U/North Dakota[2]	Awarded	1,000,000	E
Florida Memorial[2]	Awarded	1,000,000	F
Tennessee State U	Pending recognition of AWS Curriculum	800,000	F/E
Embry-Riddle Aero U	Awarded	500,000	F
National U	Awarded	500,000	F/E
Middle Tenn State U	Awarded	871,044	F/E
Purdue U	Awarded	128,956	E
Texas Southern U	Awarded	200,000	F/E
		31,168[3]	
U/North Dakota[2]	Awarded	3,828,000[3]	F/E
Delta State U[2]	Awarded	2,201,100[3]	F/E
Florida Memorial C[2]	Awarded	2,871,000[3]	F/E
Cal State U	Pending recognition of AWS curriculum	48,082	E
Eliz City State U	Awarded	144,050	E
Dowling College	Awarded	223,300[3]	F/E
Ohio State U	Awarded	223,300	F/E
U/North Dakota[2]	Awarded	3,000,000	F/E
Florida Memorial C[2]	Awarded	2,000,000	E
Auburn U	Awarded	220,255	E
Embry-Riddle Aero U	Awarded	204,000	E
Flor Inst of Tech	Awarded	1,000,000	F
Hampton U	Awarded	300,000	F
Interamerican U of PR	Awarded	947,312	F/E
Kearney State C	Awarded	162,315	E
Middle Tenn State U	Awarded	90,164	E
National U	Awarded	500,000	E
Ohio State U	Pending revised plan	900,000	F
San Jose State U	Awarded	362,800	E

Fiscal Year	Institution	Grant Status	Award $
87	Southern Illinois U	Awarded	312,754
88	Auburn[2]	Awarded	237,500
88	Embry-Riddle Aero U[2]	Awarded	1,425,000
88	Flor Instit of Tech[2]	Awarded	237,500
88	Florida Memorial C[2]	Pending grant plan	1,425,000
88	U/North Dakota[2]	Awarded	475,000
89	Daniel Webster C	Pending grant agreement	146,635
89	Dowling C	Pending grant agreement	129,265
89	Embry-Riddle Aero U	Pending grant agreement	200,000
89	Metro State U	Pending grant agreement	200,000
89	National U	Pending grant agreement	173,735
89	Parks College	Pending grant agreement	150,365

OTHER EDUCATIONAL GRANTS

Fiscal Year	Institution	Grant Status	Award $
87	Barry U[2]	Awarded	3,914,000
88	Polytechnic U[2]	Awarded	1,425,000
90	U/North Dakota[2]	Pending legal authority	3,000,000
90	Fairmount State C	Pending legal authority	3,000,000
		TOTAL	$49,709,000

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[1] F=Facilities; E=Equipment

[2] Congressionally designated awards

[3] Includes GRH reduction

GENERAL RESEARCH QUESTIONS

SENATOR LAUTENBERG: What would you characterize as your most important research projects? Why?

ANSWER: In the capacity area, FAA developed controller display aids for staggered and converging approaches which are being installed and tested in St. Louis in FY 1990. This software change will allow controllers to safely sequence aircraft approaching to two separate runways as if they were flying in-trail to the runways, significantly reducing arrival variability. This will allow use of additional runways at many airports to lower weather minimums resulting in a capacity gain of nearly 40 percent. Operational implementation is planned for 30 airports in FY 1993.

In the Aviation Security area, the Thermal Neutron Activation (TNA) system, developed under the R,E&D program, was deployed for operational test and evaluation (OT&E) at New York Kennedy and Miami airports. Installation at London Gatwick and Dulles airports is scheduled for this year.

We also completed the installation of the Baltimore-Washington International Airport (BWI) enhanced security project. The demonstration will provide information on the effectiveness, operational impact, and cost-benefit of enhanced airport security procedures and equipment.

In the Aircraft Safety area, FAA advisory circulars associated with corrosion detection prevention and control were updated related to the agency aircraft fleet. Training programs to incorporate the newer technologies have been developed. Presentation of this information to FAA maintenance and inspection personnel is underway.

In the aircraft separation area, the TCAS II production installations were certified by the FAA and the systems are in operation on scheduled air carriers.

SENATOR LAUTENBERG: What are the new initiatives?

ANSWER: The new initiatives include: National Simulation Lab, Technology Transfer, Graduate-Level Research and Education in Aviation Technology (GREAT), R,E&D Advisory Committee, Jet Route and Terminal Area Optimization, and Airborne Windshear Advanced Technology.

SENATOR LAUTENBERG: In the budget justification, you indicate you have completed your analysis of hubbing. What are your conclusions? How does hubbing impact the NAS plan and the need for new airport capacity?

ANSWER: We have performed an analysis of hubbing at Philadelphia International (PHL). This analysis considered the impact of a proposed increase in hubbing operations. The analysis revealed that with an increase of 200 operations per day expected to take place in the spring of 1990, there would be a significant increase in average local delay, but the system-wide delay would be tolerable.

With an increase of 400 operations per day, as planned for the future, average system-wide delay could become intolerable, resulting in a significant increase in en route sector saturation.

SENATOR LAUTENBERG: At the end of fiscal year 1989, you had an unobligated balance of $30.1 million after originally projecting a zero balance. What happened?

ANSWER: The large unobligated carry over was caused by problems in negotiating contracts last year - specifically in the TCAS III, synthetic vision and tiltrotor projects.

SENATOR LAUTENBERG: You are requesting 23 additional positions. How will these new personnel be used?

ANSWER: The 23 additional positions are required to support the FAA Technical Center Explosives Detection Lab, enhanced weapons detection and airport security research, aging aircraft, and other aircraft safety efforts. CAMI positions are required for research into human factors concerns.

SENATOR LAUTENBERG: Slightly over $11 million is requested for communications research. What is this money specifically for? Is the microwave communications link transition still on schedule for calendar year 1992?

ANSWER: The funding for communications research is for (1) studies on the transition from analog to digital system and specification preparation; (2) complete NADIN II Phase II expansion, (3) modeling studies of NADIN II network evolution; (4) development of additional data link services including windshear alerts and the coordination of ICAO standards; (5) in-house costs associated with managing the VSCS program in which design review will be completed, a prototype upgrade will begin operational test and evaluation, and limited production will be authorized; (6) associated in-house costs on communications planning design, NADIN, and Aeronautical Data Link.

The microwave communications link transition is still on schedule. Of the 832 planned facilities under the RCL program, 441 have been accepted from the contractor. Fifty-three of the facilities have received initial acceptance (pending final acceptance). One hundred and eighty-five facility installations and tests are in-process, and equipment is ordered for the remaining 153 facilities.

SENATOR LAUTENBERG: For system capacity research, you are requesting approximately $34 million. This program has received over $70 million over the past 3 years. What have been the results of research to date?

ANSWER: Several airspace design and procedural initiatives have been developed to increase system capacity and reduce delays:

- Airport and airspace simulations using NASPAC were conducted at DFW and the new Denver airport, which showed significant airport and airspace capacity improvements. New procedures and projects planned for these two airports will reduce delays throughout the NAS.

- Airspace capacity design simulations at Denver, Dallas, and Chicago have identified high payoff changes in airspace structure and routing aimed at relieving peak hour congestion.

- An airspace design study was completed for the Los Angeles Basin, improving traffic flow from LAX and other nearby airports. Over 38,000 hours of annual delay will be saved initially.

- Research is supporting development of triple approach arrival streams. Procedures have been approved for DFW and research is underway to allow the same capability at other airports.

- Demonstration projects are underway to improve separation standards for both dependent and independent parallel and converging approaches. These advances are possible through improved technology and controller aids being developed and tested.

SENATOR LAUTENBERG: What part of the airports' operations needs the most improvement to increase capacity?

ANSWER: The construction of new airports, as well as new runways and extensions of existing runways, are the most direct and significant actions that can be taken to improve airport capacity. Our information indicates that 65 airports of the top 100 are planning to construct new runway pavement to increase airport capacity.

New airspace procedures to increase arrival streams is second only to new runways in ability to increase airport capacity. The largest capacity payoff will come from developing procedures and technology to support dual, triple, and quadruple approaches. Other procedures that will increase airport capacity include independent approaches to closely spaced parallel runways, independent converging approaches, and improved dependent parallel approaches with 1.5 nautical mile (vs. the 2 nautical mile current standard). FAA is on-site or expects to be on-site soon with demonstrations of new procedures at Raleigh-Durham, North Carolina; Memphis, Tennessee; St. Louis, Missouri; Dallas/Fort Worth, Texas; Salt Lake City, Utah; and other cities.

Next to improved approach procedures, reducing in-trail and lateral separation between arriving aircraft are the biggest capacity gainers, followed by reducing needless gaps in arrival streams.

SENATOR LAUTENBERG: How quickly are your research efforts in this area implemented in the field?

ANSWER: Generally, procedural initiatives can be implemented within a year. Software enhancements to existing systems can be accomplished in 1-2 years. Implementing systems involving new hardware installations usually takes from 3-4 years.

SENATOR LAUTENBERG: What more can be done to implement field testing and use of research efforts?

ANSWER: We are currently reviewing our Research and Development programs to reduce the time required to develop and implement new systems. We intend to increase the number of systems that are taken to the field for R&D testing prior to the implementation decision. We are currently doing this with the Precision Runway Monitoring System tests at Memphis and Raleigh Durham and the Converging Runway capability to be tested at St. Louis. Increased use of field testing is expected to reduce the time to implementation, but will require more stringent development policies and standards and increased development cost to ensure safety in testing at operational sites.

We also have taken action to include appropriate implementation planning as part of R&D programs to increase the use of research efforts. Associate program managers in our operational organizations will help in ensuring the acceptability of R&D products.

SENATOR LAUTENBERG: You are requesting an 88 percent increase for controller human factors research. What prompted the request for such an increase? Is this research being done with NASA?

ANSWER: Our 88 percent increase for controller human factors research is based on new joint projects with NASA on enhancement of controller displays with stereo sound, and CAMI on cognitive processing of electronic flight progress data. Also included is the transition of a Small Business Innovative Research project on controller display structures to develop better means for controller interaction with display devices.

SENATOR LAUTENBERG: You show that your funding allocation to a non-profit organization, Lincoln Labs, had increased to over $30 million in fiscal year 1989. What work is Lincoln Labs involved in and what is the nature of your contract with them?

ANSWER: Lincoln Labs is involved in radar surveillance, automated system development, precision runway monitor, airport surface traffic automation, terminal automation, weather radar, satellite applications, airborne collision avoidance, and air-ground data-communications.

The nature of our contract with Lincoln Labs is through an Interagency Agreement with the USAF.

SENATOR LAUTENBERG: Please provide for the record a list of those projects conducted by Lincoln Labs, including the costs associated with each for fiscal years 1990 and 1991.

ANSWER:

Project	FY 1990	FY 1991
	(000)	
Airport Surface Traffic Auto.(R,E&D)	$ 2,250	$ 4,000
Terminal ATC Automation (R,E&D)	5,813	6,890
Mode S Integrated Tracker (R,E&D)	929	1,000
TCAS (R,E&D)	1,000	900
Aeronautical Data Link (R,E&D)	691	987
Precision Runway Monitor (R,E&D)	500	2,000
Separation Standards (R,E&D)		90
Satellite Applications (R,E&D)		1,300
Terminal Weather Radar (R,E&D)		150
Total (R,E&D)	$11,183	$17,317
Weather Radar Program/NEXRAD (F&E)	$ 1,870	$ 6,500
Mode S Surveillance (F&E)	400	450
Parallel&Converging Runway Monitor(F&E)	2,500	3,500
Replace ASR-4/5/6 Radar System (F&E)	3,700	0
Replace ASR-9 Radar System (F&E)	0	3,000
Establish ASDE-3 (F&E)	0	125
Terminal Doppler Weather Radar (F&E)	8,030	0
Provide Terminal NEXRAD	600	0
Total (F&E)	$17,100	$13,575
GRAND TOTAL	$28,283	$30,892

SENATOR LAUTENBERG: You are requesting $4,082,000 in fiscal year 1991 for a national simulation laboratory, and you indicate that you will be spending $57.5 million for this lab over the next four years. Where is this laboratory, and why is it essential at this time -- don't you currently test your new and proposed systems?

ANSWER: FY 1991 funding is for the development of an interim software simulation facility, referred to as the Integration Laboratory (I-Lab). This interim facility is under development at MITRE Corporation's facilities in McLean, Virginia; the future location of the permanent facility is yet undetermined.

The permanent facility's principal function is to integrate via simulation, new R&D system concepts such as automation in the airport, terminal, and en route environments. No capability presently exists for FAA to conduct integrated systems simulations of future ATC concepts. This capability is essential for determining the requirements of future systems, how these systems integrate into the current and future NAS environments, and obtaining up-front user (controller and pilot) feedback on requirements and prototype system design.

SENATOR LAUTENBERG: You are requesting $1,380,000 for beacon research. This includes $1,130,000 to develop a Mode S integrated tracker. Last year, we were told that this is an integral part of your AAS program. When will you need to have this system developed and implemented?

ANSWER: Integrated Radar Beacon Tracker (IRBT) is functionally part of the overall AAS Program; however, the actual hardware/software is located at the surveillance site. The IRBT is needed in the 1996 to 1998 timeframe.

SENATOR LAUTENBERG: What R&D costs will be incurred on VSCS?

ANSWER: R&D funding for VSCS in FY 1991 will amount to $1.06 million.

SENATOR LAUTENBERG: Provide for the record the total VSCS costs incurred to date (in both R&D and under the facilities and equipment account).

ANSWER: The following data is provided for the record.

Fiscal Year	R,E&D	F&E 1/	Total
1987 and prior	71.9	...	$ 71.9
1988	50.0	...	50.0
1989	1.4	63.5	64.9
1990	1.1	172.2	173.3
Total	124.4	235.7	$360.1

1/F&E costs are to cover invoice expenses.

SENATOR LAUTENBERG: Also provide the projected costs for fiscal years 1991 through 1995 in the same format.

ANSWER: The following projected cost data is provided for the record.

Fiscal Year	R,E&D	F&E	Total
1991	1.0	185.1	$186.2
1992	1.1	222.2	222.8
1993	1.1	115.6	116.7

1994	1.2	99.0	100.2
1995	0	26.8	26.8
Total	4.4	648.7	$652.7

SENATOR LAUTENBERG: You are requesting $9,025,000 for Mode S data link research and you state that in the near-term, this system will provide data to the pilots, thereby relieving the controller of voice transmissions. How soon will these near-term benefits be realized?

ANSWER: When we begin transmitting weather products in 1992, concurrent with availability of the Mode S sensor and the Data Link Processor.

SENATOR LAUTENBERG: To what extent is your simulation model (SIMMOD) used, and what capacity improvements have resulted?

ANSWER: FAA is presently using SIMMOD to evaluate proposed airspace and airport/configuration changes. FAA SIMMOD studies have included airspace and/or airport changes at Boston, Los Angeles, Chicago, Dallas/Ft. Worth, and Denver. Additional studies at Oakland, Sacramento, Kansas City and New York are planned. The SIMMOD review of realigned airspace at Dallas/Ft. Worth indicates a 15 percent capacity gain is possible. An analysis of proposed Los Angeles airspace realignments can hold delays in the year 2000, after accounting for traffic growth, equal to or less than those experienced today. A public version of SIMMOD has been available since October 1989; 60 private organizations have acquired the model since then. While we are not always privy to users' applications, we are aware of 16 completed airport and airspace studies; 14 on-going, and 12 in planning stages.

SENATOR LAUTENBERG: You are requesting an additional $2 million to continue your evaluation of a precision runway monitor at Raleigh-Durham Airport (RDU). What is the status of your tests at RDU -- how effectively is the system performing, and when do you expect to certify it?

ANSWER: Demonstration for closely spaced, dual parallel runways at RDU will be complete July 1990 with results available in September 1990. The system is performing effectively in the tests thus far. Assuming a successful demonstration, certification for closely spaced, dual parallel runways is expected for July 1991.

SENATOR LAUTENBERG: The airline association is concerned about wake vortex research. Two major technical areas that you were working were vortex alleviation and vortex sensor development. Have you developed anything during the past year to address these two problem areas?

ANSWER: Two wake vortex sensing systems were developed or updated for wake vortex research activities. They are Laser Doppler Velocimeter (LDV) and Monostatic Acoustic Vortex Sensing System (MAVSS). The LDV will be used to accurately measure vortex core characteristics. The MAVSS will be used to track slowly moving or stalled vortices and to perform automatic around-the-clock collection of wake vortex data in the field. Work will be initiated in FY 1991 on developing a ground-based vortex warning sensor, such as a bistatic radar.

SENATOR LAUTENBERG: You are requesting $7,582,000 for terminal ATC automation. What is the status of your operational evaluation of a final approach spacing aid?

ANSWER: We are presently conducting tests of a final Technical Center approach spacing aid for dependent converging approaches at the FAA, and plan to install the aid in the St. Louis TRACON to begin operational tests and evaluation in May 1990.

SENATOR LAUTENBERG: Last year, it was indicated that your terminal ATC automation would increase throughout by about 28 percent at all major hubs. Is this still a valid projection? If so, what are the estimated costs to achieve this? When will the benefits be realized?

ANSWER: Implementation of the full complement of TATCA system functions now under development will be required to achieve the full 28 percent projected improvement in throughput. The R,E&D for this work is expected to cost $62 million. The cost of implementation of these capabilities had not been estimated.

SENATOR LAUTENBERG: You are requesting $2,151,000 for airport capacity task force studies. To what extent have the recommendations made to Atlanta, Detroit, San Francisco, and St. Louis been implemented?

ANSWER: We are very pleased with the success rate of the airport capacity design teams in general. Of the four locations mentioned, Detroit has the best record with about 92 percent of its 26 potential projects in some stage of implementation. Next are Lambert-St. Louis with 55 percent of its 31 projects and Atlanta-Hartsfield with about 50 percent of its 15 projects underway. In San Francisco, nearly 44 percent of its design teams' recommendations is in the process of implementation at this time.

SENATOR LAUTENBERG: Please provide the recommendations made in those task force studies completed during the past year. What recommendations have been implemented?

ANSWER: The following lists provide task force study recommendations for Atlanta, Detroit, San Francisco, and St. Louis Airports.

ATLANTA-HARTSFIELD INTERNATIONAL AIRPORT CAPACITY DESIGN TEAM PROJECT SUMMARY

RECOMMENDED IMPROVEMENT

Airfield Improvements

(1) International concourse

(2) Fifth concourse

(3) Commuter/GA terminal and runway complex south of R/W 9R/27L

(4) Three hold pads/bypass taxiways at end of departure runways

(5) Taxiway C parallel to the west of taxiway D (not pictured)

(6) Angled exits for commuter aircraft; widen fillets at exits to facilitate their use in either direction (not pictured)

Facilities and Equipment

(7) Expedite development and installation of wake vortex forecasting and avoidance systems

(8) Upgrade NAVAIDS and approach lights on R/W 26R and 27L to Category II

(9) Update terminal approach radar

(10) Upgrade RVR system to CAT IIIB and ICAO standards

IMPROVEMENTS

(11) Install ASDE III with tracking

(12) Install touchdown zone lights on R/W 27L

Operational Improvements

(13) Reduce arrival separations to 2.5 nm

(14) Enhance traffic management procedures

User Improvements

(15) Depeak airline schedules within the hour

DETROIT METROPOLITAN WAYNE COUNTY AIRPORT
CAPACITY DESIGN TEAM PROJECT SUMMARY

RECOMMENDED IMPROVEMENT

Airfield Improvements

(1) Holding Apron and Taxiway South
(2) Runway and Taxiway Improvement Package
    (2a) Highspeed Exit Taxiway - Runway 21R to Taxiway Y
    (2b) Extend Taxiway Z to Taxiway V
    (2c) Construct and Expand Holding Aprons at Runways 3C, 3L, and 3R
    (2d) Extend Inner Taxiway Parallel to Taxiway H
    (2e) Construct Exit Taxiway - Runway 9/27 to Taxiway H
    (2f) Construct Taxiway S to East GA Area
(3a) Terminal Expansion
(3b) Mid-Field Terminal
(4) Construct Independent Crosswind Runway - 9R/27L
(5) Construct Independent 4th N/S Runway

Facility and Equipment

(7a) ILS MLS and Approach Lights on Existing Runway 3C
(7b) RVR for Existing Runway 3C
(8) ASDE
(9) Terminal Doppler Weather Radar
(11) RVR and Centerline Lights on Runway 27
(12) Expedite Development and Installation of Wake Vortex Forecasting and Avoidance System
(13) Install an Airport VOR

Air Traffic Control Improvements

(14) Independent Converging VFR/IFR Approaches to Runways 27 and 21R, Hold Short of 21R
(15) Add Controller Positions Establish STAR Routes, Relocate MOTER Intersection
(16) Use Departure Corridors
(17) Realign Cleveland Center Sector Airspace
(18) Expand Tower En Route Program
(19) Reduce Arrival Longitudinal Separation to 2.5NM
  (19a) Runway Occupancy Time Reduced 10%
  (19b) Runway Occupancy Time Reduced 20%
  (19c) Runway Occupancy Time Reduced 30%

User Improvements

(20) Relocate General Aviation Traffic Users
(21) More Uniform Distribution of Scheduled Operations Within the Hour

SAN FRANCISCO INTERNATIONAL AIRPORT CAPACITY DESIGN TEAM PROJECT SUMMARY

RECOMMENDED IMPROVEMENT

Airfield Improvements

(1) Create Holding Areas Near Runway 10L/R, 1R and 28R

(2) Improve Noise Barrier for Runway 1R

(3) Extend Runway 19L/R

(4) Extend Runway 28L/R

(5) Construct Independent Parallel Runway 28

(6) Extend Taxiway C to Threshold Runway 10L

(7) Create High Speed Exit From Runway 10L Between Taxiways L and P

(8) Extend Taxiway T to Taxiway or A

Air Traffic Control Improvements

(9) Expand Visual Approach Procedures

(10) Offset Instrument Approach to Runway 28R

(11) Use Staggered 1-Mile Divergent IFR Departures on Runway 10L/R

Facilities and Equipment

(12) Install Microwave Landing System (MLS) on Runway 28 and 19

User Improvements

(13) Taxi Aircraft Across Active Instead of Towing

(14) Distribute Airline Traffic More Evenly Among Three Airports

(15) Distribute Traffic Uniformly Within the Hour

(16) Divert 50% General Aviation to Reliever Airports

LAMBERT-ST. LOUIS INTERNATIONAL AIRPORT CAPACITY DESIGN TEAM PROJECT SUMMARY

RECOMMENDED IMPROVEMENT

Airfield Improvements
(1) New Runway Parallel to Runway 12L/30R
    (1A) Alternate 1: New Independent Commuter Runway 2500' from Runway 12L/30R
    (1B) Alternate 2: New Dependent Commuter Runway 1400' from Runway 12L/30R
    (1C) Alternate 3: New Independent Air Carrier Runway Parallel to Runway 12L/30R
(2) Convert Taxiway F to Permanent VFR Runway 13/31
(3) Angled Exits on Runway 12L/30R (Not Pictured)
(4) Taxiway Extensions
    (4A) Extend Taxiway A-South to End of Runway 30L
    (4B) Extend Taxiway P from Taxiway C to Taxiway M (Not Pictured)
    (4C) Extend Taxiway C from Taxiway F to Runway End 24
(5) Realign Taxiway B off A to Runway 12R/30L (Not Pictured)
(6) Establish Queuing Areas to Various Runway Ends (Not Pictured)
(7) Relocate Cargo Area (Not Pictured)
(8) Relocate Mid Coast Aviation to Northeast (Not Pictured)

Facilities and Equipment
(9) Install Marker Lights and Parking Lanes in Center Field Remote Holding Area (Not Pictured)
(10) Wake Vortex System
(11) Install Cat III ILS to Reduce Approach Minima on Runways 12L and 12R
(12) IFR Approaches with Additional Instrumentation on Runway 6
(13) IFR Approaches with Additional Instrumentation (RAIL) on Runway 24
(14) LDA Approaches Support
    (14A) Equipment Installation on Runway 30L
    (14B) Equipment Installation on Runway 12L
(15) Install Light Systems at Taxiway and Runway Intersection
(16) Install ASDE

Operational Improvements
(17) Reduce IFR Parallel Approach Stagger to 2NM
(18) Reduce IFR Initial Separations to 2.5NM
(19) Converging IFR Approaches to
    (19A) Runway 6 and 30R
    (19B) Runway 6 and 30L
(20) Converging IFR Approaches to
    (20A) Runways 24 and 30R
    (20B) Runways 24 and 30L
(21) Simultaneous Approaches to ILS 30R, LDA 30L, and ILS 24

User Improvements
(22) Change Fleet Mix
    (22A) Relocate GA 25%
    (22B) Relocate GA 50%
    (22C) Relocate GA 75%
(23) Distribute Scheduled Commercial Operations Within the Hour
(24) Relocate Air National Guard

SENATOR LAUTENBERG: You are requesting $946,000 to develop airspace system models to analyze the system impact of new equipment, procedural changes and airspace configurations. Which specific types of equipment, procedural changes or configurations do you intend to analyze this year?

ANSWER: This request is for funds to develop an interactive tool to aid airspace planners and designers in evaluating proposed changes in airspace configurations. This initial model will be used by the FAA Air Traffic Service to redesign sector airspace to reduce controller workload and to more evenly balance workload between sectors. A first application of this will be the proposed redesign of sector airspace in the Chicago ARTCC environment.

SENATOR LAUTENBERG: You are requesting $3,164,000 for satellite applications and you state that satellite-based capabilities may eliminate the need for substantial portions of the existing en route airway facilities infrastructure. Which systems do you expect we will be able to replace with satellite-based systems, and what is the timeframe for these replacements?

ANSWER: The satellite applications activity is aggressively developing civil aviation uses for satellite capability as a potential substitute for existing ground-based capabilities.

Initial applications of satellite systems for air-ground communications, navigation and surveillance will be in oceanic and in low altitude/offshore areas not well served by ground-based facilities.

In the 2010 timeframe, satellite systems may be used extensively for navigation (possibly, in lieu of VOR/DME) and may support surveillance and communications functions as well (in lieu of existing ground-based facilities).

SENATOR LAUTENBERG: You are requesting $5,198,000 for automatic dependent surveillance (ADS) research. What is it? Is this a satellite-based system?

ANSWER: Yes, the Automatic Dependent Surveillance (ADS) system is based on an existing commercial satellite system for communication of position data.

SENATOR LAUTENBERG: You are requesting $1,216,000 for a new program of graduate-level research and education. How are these funds to be used? What is Rutgers University's role in this new program?

ANSWER: The program is budgeted at $1,256,000 for FY 1991. These funds are used to support Rutgers University graduate fellows. These students are studying in areas of high interest to the FAA. Rutgers professors provide oversight on the research done by the students.

SENATOR LAUTENBERG: You are requesting $14,178,000 for ATC automation. What specifically will be studied? What benefits do you expect?

ANSWER: For the Advanced Traffic Management System (ATMS), we plan to study airspace flow management issues and evaluate the integration of international, domestic and oceanic flow control strategies. The oceanic air traffic data, graphic weather data and the automated demand resolution function will be incorporated into the operational TMS.

In FY 1991, requirements will be developed for the data base structure and communications necessary to manage Dynamic Special-Use Airspace (DSUA) and for the ATC automation at both the Advanced Traffic Management System and Advanced Automation System (AAS) levels necessary to support improved DSUA operational procedures.

For Automated En Route Automation (AERA 3), the top level design will be completed, a demonstration and evaluation of Build 3 will be completed and an operational concept defining the role of the Airspace Manager will be completed. The results of these efforts will be used in preparing the draft AERA 3 functional specifications and technical/human interface requirements which are on schedule to be completed by the 1992/1993 time frame.

The benefits of Advanced Traffic Management System (ATMS) include development, documentation, and implementation of advanced capabilities for the aircraft situation display, monitor alert, automated demand resolution, strategy evaluation, and automated message distribution. The increased precision of the flow management process will provide significant operational benefits to both the ATC system and the system users, e.g., more efficient flow of traffic both on the ground and in the air.

DSUA will increase the flexibility in the use and assignment of special use airspace to both military and civilian users.

AERA 3 provides flight time and fuel savings from more direct routing; greater accommodation of user-preferred flight profiles; improve levels of safety; increased system throughput, and increased controller productivity through greater automation and use of data link.

SENATOR LAUTENBERG: What benefits are expected from AERA (en route air traffic control) research? How are you measuring the performance of AERA 1, 2, and 3?

ANSWER: AERA 3 takes over completely near-term tactical separation of aircraft function. The controller becomes an airspace manager dealing with strategic flow management of traffic. It automatically detects problems, determines resolution, and generates appropriate clearance ships, via data link to the involved aircraft. Therefore, AERA 3 will provide flight time and fuel savings from more direct routing; greater accommodation of user preferred, fuel efficient routes; improved levels of system safety; and increased controller productivity through increased automation and use of data link.

AERA 1 and 2 benefits are centered on productivity gains by providing automation aids to the controller. AERA 1, which is an integral part of AAS includes basic trajectory calculation improvements and probes for predicting potential violations of separation standards, protected airspaces and flow restrictions. AERA 2 generates a set of prioritized resolutions for problems AERA 1 detects.

Extensive real-time simulations and laboratory evaluations will be conducted prior to field deployment. Following deployment, actual system data will be gathered to measure AERA's performance.

SENATOR LAUTENBERG: What is the status of AERA 1, 2, 3 research?

ANSWER: AERA 1 is currently being designed as part of the Area Control Computer Complex (ACCC) of the AAS contract. The ACCC Critical Design Review is scheduled to begin March 1991. FA is in the process of writing detailed system level specifications and operational documents, which will be made available to IBM in June 1990. IBM is presently assessing the impact of AERA 2 requirements on ACCC design and will begin developing AERA 2 software after the system level specifications are delivered by the FAA. AERA 3 functionality is in the concept development, refinement, prototyping and evaluation phase. The results of these efforts will be used in preparing the AERA 3 functional specifications and technical/human interface requirements which will be completed in 1993.

SENATOR LAUTENBERG: What products or findings of the aviation weather research program have been implemented over the past 3 years?

ANSWER: The Windshear Training Aid was implemented during the second quarter of fiscal year 1987. Today it is in use by all major air carriers around the world.

Two annual meetings which have transferred the technology to the industry have been conducted in fiscal years 1988 and 1989, the third will take place in the first quarter of fiscal year 1991. These technology transfers have included windshear hazard characterization, the characteristics of heavy rain on flight performance, the quantification of aircraft performance penalties due to windshear encounters and the airborne windshear systems technology assessments. All of this data has been used by the industry as leverage for their own sensor development programs.

The Meteorological Weather Processor will become operational this year. This will provide the CWSU meteorologist a modern tool to provide the ARTCC controllers and traffic management specialists weather forecast information. Two enhanced LLWAS' of one warning from this system that probably saved a commercial airliner from a wind shear disaster in 1989. Two TDWR test-bed systems provided operational warnings of windshear during the summer months of 1988 and 1989, at Denver and Kansas City Airports. Warnings from the Denver system were effective in a severe wind shear episode in 1988. These operational demonstrations have been effective and will lead to operational systems beginning in 1993.

SENATOR LAUTENBERG: How will the $7.7 million requested be spent?

ANSWER: The $7.7 million will be used to: (1) Develop, test, and evaluate CWP interfaces to other elements of the NAS, $1,653,000; (2) Provide an improved operational capability to detect, monitor and forecast aircraft icing, $982,000; (3) Develop requirements for airborne windshear systems by using airborne detection, warning and avoidance, $1,041,000; (4) Improve the performance of the Low-Level Windshear Alert System, $500,000; (5) Develop and demonstrate the flight crews' windshear information system requirements, $641,000; (6) Develop new algorithms for the Terminal Weather Radar, this year's effort will be the continuation of the development of additional weather products such as: prediction of the formulation of microbursts, turbulence detection, tornado detection, and storm movement prediction, $2,022,000; and (7) Demonstrate and evaluate radar, lidar, infrared and next generation reactive system performance as potential airborne windshear detection devices, $900,000.

SENATOR LAUTENBERG: Briefly describe (including costs) the research on windshear (both ground and airborne).

ANSWER: Airborne research on windshear is divided into two basic parts: the first relates to the crew, and their interaction with the vehicle when windshear encounters are probable. In this effort, we will examine aircraft typical of the general aviation, business aircraft and air taxi/commuter airlines. The work will include simulation and in-depth analysis to ensure applicability of the windshear training to these aircraft. The funds that will have been expended at the conclusion of this work will approach $3 million.

Second is the development of airborne sensing devices. These include both in situ devices which detect windshear which the aircraft has encountered, and those that look ahead of the aircraft's flight path and predict the hazard that will be encountered. FAA and NASA are active partners in this research. The funds have averaged $2 million per year and have been shared between FAA and NASA.

On the ground side, two major activities have been underway. These are the development and implementation of the Low-Level Wind Shear Alert System (LLWAS) and the development of the Terminal Doppler Weather Radar (TDWR).

The LLWAS is currently operational and detects thunderstorm gust fronts and other larger frontal types of windshear. FY 1991 R&D efforts are aimed at exploring the benefits and costs of microburst windshear detection enhancements to LLWAS. The research funds that have been expended this fiscal year total $600,000.

The TDWR system is a radar tailored to meet FAA requirements for windshear and other hazardous weather detection in the terminal environment. The most important TDWR product is a microburst detection capability. Other products to be provided by the TDWR are reflectivity, turbulence, storm location, storm movement predictions, tornadoes, gust fronts, and wind shift predictions. The funds that will have been expended at the end of FY 1992 are estimated to be $54 million.

SENATOR LAUTENBERG: Why is an additional $2 million necessary for terminal weather radar research?

ANSWER: The $2 million funding will cover development of a turbulence detection algorithm that can be added to the terminal Doppler weather radar at a future date utilizing a software upgrade.

SENATOR LAUTENBERG: How will this affect the funding already provided for radar procurements?

ANSWER: There is no impact on the funding already provided for the Terminal Doppler Weather Radar (TDWR) procurement. The TDWR is being procured with extra processing capability so that additional meteorological algorithms such as the turbulence detection algorithm can be added utilizing only a software modification.

SENATOR LAUTENBERG: Aviation medicine research is a continuing effort. List the major areas needing 1991 research funding.

ANSWER: Air Traffic Control Radar Display Scanning. There have been repeated instances of operational errors in which controllers report not seeing information which was in fact present on the radar scope, especially involving small VFR aircraft incursions into controlled airspace. This research will objectively measure eye movement scanning strategies of successful controllers. The data will be used to develop a training program on effective scanning techniques. Data on controller scanning strategies are not currently available.

Air Traffic Controller Memory Enhancement. The purpose of this research is to develop, implement, and validate memory aids immediately applicable to the present Air Traffic Control System. There have been excessive instances of operational errors in which forgetting critical information (due to interference, distraction, etc.) was identified as the primary cause. There is a need to map memory requirements against existing job tasks and devise practical memory aids tailored to those tasks.

Neurophysiological Correlates of Controller Performance. The purpose is to establish the relationship between state-of-the-art neurophysiological measures and air traffic controller performance. Projected modernization will change the role of the controller increasingly towards that of an information processor and system monitor. Metrics sensitive to the controller's capacity to function in this more passive role are sorely needed to optimize system design and implementation.

Aging Aircraft - Human Factors. The purpose is to enhance the understanding of human needs and limits in the performance of airplane maintenance and inspection tasks by performing field and laboratory studies of the activities of maintenance and inspection personnel. Critical or error-prone task and task elements will be determined and related to such factors as training, communication, work environment or task design. Recommendations will be made to reduce error through application of remedial measures such as improved equipment design, training methods, or communication methods.

Bioengineering Research. The purpose is to improve the protection of the aircraft occupant and critical biological and chemical efforts which permit the assessment of biochemical and toxicological factors in the causation of aircraft accidents. Specific clinical research must be supported to assess and improve airman medical selection criteria in the cardiovascular, neuropsychological, and vision subsystems.

Research on ATC selection and training. The purpose of this research is to assess the validity of the current program, to evaluate alternative selection systems, and to develop effective selection measures for future ATCS's coming in under the Advanced Automation System. This research is designed to evaluate pilot certification and training programs and agency efforts to improve the work environment and user services. Human factors research is needed to assess ATCS and pilot performance in different task conditions (e.g., high/low workload) and under various aviation stressors (e.g., age, altitude) to determine the optimal environment for task performance and establish medical criteria for selection and retention in aviation occupations.

SENATOR LAUTENBERG: How are findings in aviation medicine implemented?

ANSWER: In response to human factors and performance areas, research studies are developed and coordinated with task sponsors, other FAA organizations, and contractor groups to insure that studies are accurately targeted, to share resources, and/or to supplement other research being conducted by other FAA or contractor groups. Results are directly fed back to task sponsors and other relevant groups to make determinations regarding, for example, color vision requirements for ATCS's, improving selection programs. The flow of coordination and reporting includes the following groups:

o Contractors for equipment development and research (e.g., Mitre, CTA, and Logicon)
o FAA research organizations (e.g., Technical Center, Human Factors Coordinating Committee)
o Task sponsors (e.g., Office of Personnel, FAA Academy, Air Traffic)

In other areas of research, dynamic impact testing programs are developed subsequent to inputs from FAA and NTSB investigators, FAA airworthiness staff, Society of Automotive Engineers (SAE) multidisciplinary committees with standards-setting interests, and all domestic and many international seat and restraint system manufacturers. Thus, after completion of any segment of development and testing work, results flow directly to:

o Regulatory Staff (FAA)
o Investigative Staff (FAA&NTSB)
o Independent Technical Committee
o Private Manufacturers
o Other Government Groups (Army, Navy, Air Force)

Aircraft Cabin Safety research initiatives are structured with the inputs of the following groups. Results are reported to them.

o Flight Standards Staff (FAA)
o Technical Center Staff (FAA)
o Airworthiness Staff (FAA) (Provided substrate of regulations.
o Other Government Groups (Air Force)
o Independent Technical Committees (SAE)

Biochemical and toxicological research has similarly closed the loop in the development and application pathways that include:

o Medical Staff (FAA)
o Airworthiness Staff (FAA)
o Independent Technical Committees (SAE, SAFER)

Clinical Research data is directly fed into the civil airman medical certification process, with the added knowledge base permitting more precise evaluation of specific individuals with a variety of disease states, or a variety of corrective states ranging from use of pharmaceutical and prosthetic devices (e.g., intraocular lenses).

SENATOR LAUTENBERG: List significant findings produced through the aviation medicine program.

ANSWER: The Office of Aviation Medicine developed a comprehensive body of training materials in aeronautical judgement and pilot decisionmaking. A series of cross-validated empirical studies established that aeronautical decisionmaking training produces measurable and statistically significant improvements in observed safety of pilotage.

An analysis under the technical direction of the Office of Aviation Medicine on the human factors involved in aging aircraft maintenance procedures identified numerous needed improvements. A handbook detailing recommended practices for aging aircraft human factors is being prepared. Other significant findings include the following items:

o Reported on static and dynamic crashworthiness tests of passenger, commuter, flight deck, and cabin attendant seat and restraint combinations. A prototype seat was developed that is suitable for use in commuter aircraft environment.

o Evaluated passenger protective breathing devices in air carrier cabin evaluation environments.

o Technical findings were incorporated in Advisory Circular entitled "Radiation Exposure of Air Carrier Crew Members."

o Developed test method of inboard contaminant leakage in the evaluation of flight protective gear.

o Developed prototype automated cognitive function testing tool to assist in the medical evaluation of civil airman after brain injury and disease episodes.

o Evaluated specific vision issues of relevance to medical certification (e.g., glaucoma and hypoxia, contrast sensitivity and selection of airman and air traffic controllers).

o Identified the influence of computer assistance on conflict detection on a simulated ATC monitoring task.

o Determined the effects of monitoring under high and low taskload conditions on detection of flashing and colored radar targets.

o Assessed the influence of color vision deficiency of performance in a task simulating color use in ATC duties and on clinical color vision tests to evaluate current and determine future color vision standards.

o Developed a model to assess the effects of aviation system changes on controller workload and performance.

o Developed materials on helicopter emergency medical services for pilots and operations managers to improve judgment.

o Constructed a human factors checklist for use in evaluating relevant aspects of maintenance and inspection programs of air carriers conducted under the Agency's Fleet Evaluation Program.

o Completed studies on biographic data and Academy ATC Screen performance, ATC Academy Screen test performance and success in field training, personality variables and ATC Screen performance, and age and training performance to validate the ATC screen and provide information for programmatic decisionmaking regarding selection and training.

o Analyzed the demographic characteristics and projected retirements in the Airway Facilities workforce in order to determine current and future staffing needs and training requirements.

o Developed job task analyses of the tower cab and TRACON ATCS positions for use in selection, training, and performance evaluation.

o Evaluated facets of job satisfaction of agency employees as part of a program of longitudinal assessment of agency effectiveness and productivity.

o Developed and administered a measure of pilot attitudes regarding services received under the Model 1 system employed by an automated flight service station as a model for future assessments of user satisfaction.

o Assessed FAA management strengths and weaknesses using scientific survey data and identified implications for training and development.

SENATOR LAUTENBERG: What is "workforce optimization"?

ANSWER: Workforce Optimization is a research area that focuses on increasing efficiency, productivity and safe performance of agency and aviation personnel through the application of human factors research, while at the same time maintaining or enhancing positive employee attitudes toward work envinronments.

Research, data bases and tracking systems are developed which monitor and evaluate selection, training, and performance of personnel operating national aviation systems. Data is obtained from laboratory and field sources; simulator performance, individual and crew performance test scores, operational error counts, supervisory ratings, demographic characteristics, training results and subordinate appraisals and ratings by aviation operators.

This research is used to (a) identify the effects of various environmental stressors on aviation-related performance and job satisfaction and (b) improve selection tests, training and certification programs thereby reducing initial training failure rates, and increasing the probability of future retention of Air Traffic Control Specialists, other FAA personnel, and airmen. Standardization and improvement of selection, training, and certficiation procedures, which take into account the changing national aviation systems, will enhance aviation safety, improve cost-benefits, and enhance transitioning of operators to more highly automated work environments.

SENATOR LAUTENBERG: List the major contracts, to whom issued, and the funding amounts that would be supported with the $47 million requested for aircraft safety.

ANSWER: The information follows:

Program Amount	Description	Contractor	
Aircraft Systems Fire Safety	Computer Assisted Emerging Management	Boeing	200K
Propulsion Fuel Safety	Advanced Engine Bird Analysis	Galaxy	165
	Bird Damage Thrust Loss Criteria	Competitive	165
	Engine Thermal Durability Study	Competitive	110
	Engine Mechanical Durability Study	Competitive	110
	Flammability Sensor Development	Competitive	165
	Safety Fuel Evaluations	Competitive	220
Structural Crashworthiness/ Airworthiness	Aircraft Crash Dynamics/ Occupant	8A	250
	Analytical Modeling	Lockhead	200
	Crash Resistant Fuel Systems	Lockhead	215
	Composite Airframe Impact Dynamic	NASA	250
	Composite Structures Failure Analysis	USAF	200
	FAA Composite Instr. Materials Development/Update	Competitive	200
	Advanced Materials Property Test Method	Army	300
	NDI Under Strength Bonds	Grumman	150
	Advanced Materials Load Spectrum Effects	Navy	300
	Composite Structures Foreign Object Damage/Containment	Navy	200
	Flight Testing of Radial Tires	Competitive	150
	Landing Gear Design For Damage Tolerance	Competitive	150
	Landing Gear Safety Aspects To Meet Crashload Condition	Competitive	150
Aging Aircraft	Aging Aircraft Program Integration	Galaxy	150
	Technology Transfer	Galaxy	200
	Structural Integrity Failure Mechanisms	TSC	637
	Structural Safety/Risk Analysis	Galaxy	200

	Fatigue Analysis/Test Methodologies	TSC	100
	Proof Pressure Testing	TSC	100
	Engine Static Component Condition	SAIC	150
	Flight Loads	NASA	200
	Structural Integrity Plan	Navy	300
	Structural Repair Technology	TSC	300
	NDI Equipment Evaluation	Galaxy	216
	Engine Non-destructive Evaluation	Galaxy	300
	Engine Repair Practice Evaluation	B&M Tech	250
	Operational Maintenance Inspect Rev	Competitive	400
	Corrosion, Retention, and Prevention	Competitive	700
	Advanced NDI	Galaxy	300
Flight Safety Atmospheric Hazards	Electromagnetic Environment Data Collection	NASA	205
	Electromagnetic Environment Analysis	EMA	213
	Electromagnetic Reg/Standards	LTI/DOE	125
	Electromagnetic Testing	DOE	200
	Icing Atmospheric Characterization	NRL/U of Dayton	100
	Icing Procedures & Technology	Competitive	125
	Icing Simulation & Analytical Technology	NASA	108
	Ground Deicing	Rutgers/ U/ARINC	275
	Digital Systems Validation Handbook	CRM	175
	Digital Systems Validation Advanced Technology	NASA	150
	DIG System Valid Electro-Optical Flight Control Issues	NASA	150
	Flying Qualities Data Analysis & Certification	Competitive	160
	Flying Qualities Studies	Competitive	143
	Flying Qualities Accident/ Incident Operations & Safety	Competitive	150
Explosives Detection	Dual Sensor Study/Support	SAIC	500
	Fast Neutron Study	SAIC	300
	Nuclear Proto Dev.	DOE/Los Alamos	1000

	Nuclear Proto Dev.	MOC/Foreign Govt	1000
	Vapor Portal Dev/Test	TSC	1600
	Vapor Detector/Dev.	DOE/Oakridge	500
	Biotechnology Detector	Naval Res. Lab.	800
Development	Vapor Technology Support	DOE/Sandia	300
	New Technology Awards	Competitive (BAA)	1500
	New Technology Studies	Competitive	1500
	Explosives Detection Lab.	Competitive	6000
	Purchase & Deployment of Vapor Detectors	Competitive	7018
Weapons Detection	Millimeter Wave Prototype Development	DOE/Battelle	1200
	Bottle Screener Prototype Development	Competitive	300
Airport Security	Airport Demonstration Study	Sandia	900
	Access Control Study	Competitive	200
Security	Explosive Testing Support	Competitive	100
	Blast Suppression Studies	Competitive	300

Approximately $10 million is for in-house costs and the remaining $2 million is for minor contractual support.

SENATOR LAUTENBERG: List all the projects for which you are requesting F&E and RE&D funds simultaneously, including the amount in each category and why you require F&E funds before your RE&D work is finished.

ANSWER: Below is a list of projects for which we are requesting FY 1991 F&E and R,E&D funds simultaneously, including the amount in each category and why we require F&E funds before R,E&D work is complete.

JOINT F&E AND R,E&D FUNDING REQUESTS

Central Weather Processor (CWP) F&E	- $10.0 million
Research, Engineering & Development	- $ 1.7 million

There are two reasons for both F&E and R,E&D funds in the CWP program. This effort now consists of two components: the Meteorologists Weather Processor (MWP) and the Real-Time Weather Processor (RWP). F&E funds are being used for initial leasing of commercially available MWP systems to install in the field; therefore, there is no development associated with the MWP. We are using F&E as well as R,E&D funds for the RWP because the software is undergoing prototype development using commercially available off-the-shelf hardware.

Aeronautical Data Link F&E - $10.0 million
Research, Engineering & Development - $ 9.0 million

The Data Link Processor (formerly the Weather Communications Processor) is being procured with F&E funds which will provide the communications equipment and software (with the weather data base) necessary to support the initial weather services. The system has expansion options and capability to perform air traffic control services as well as support more automated weather services (e.g., windshear alerts and airmets). The R,E&D funds are being used to develop these follow-on services to the initial weather services, develop the software, and perform validation tests.

Automatic Dependent Surveillance (ADS) F&E - $ 6.7 million
Research, Engineering & Development - $ 5.2 million

R,E&D funding for this effort will be allocated towards step 2 data link requirements definition. Step 1 software integration of ADS position reports with the exiting ODAPS oceanic tracking system will be accomplished via ADP development. F&E activities include establishment of a development facility and attendant licensing and maintenance support costs.

Traffic Management System (TMS) F&E - $17.0 million
Research, Engineering & Development - $ 5.1 million

R,E&D funding is required for ATMS automated demand resolution (ADR), strategy evaluation (SE), and automated message distribution (AMD) concept development. F&E funding is required to implement phase II TMS enhancements for Stage 2 and 3 system upgrades. These include traffic management unit (TMU) upgrades, aircraft situation display (ADS) implementation, TRACON automation and monitor alert implementation.

Terminal Doppler Weather Radar (TDWR) F&E - $83.7 million
Research, Engineering & Development - $ 2.0 million

The TDWR system is designed with the flexibility to enhance and add weather products by changing only software. The TDWR system being procured by F&E funds will initially provide the following weather products: microburst detection, gust front detection, wind shift prediction, and reflectivity (precipitation intensity). The R,E&D funds being used to enhance the microburst detection algorithm to provide an advanced warning of the formation of microbursts and to provide TDWR turbulence detection products.

Precision Runway Monitors F&E - $10.6 million
Research, Engineering & Development - $ 2.0 million

R,E&D funding is to continue research on applying the precision monitor to situations other than closely spaced parallel runways, i.e., converging runways, and triple and quadruple parallels. F&E funding will continue the procurement of the first two runway monitor systems.

Global Positioning System (GPS) F&E	- $ .8 million
Research, Engineering & Development	- $ 1.6 million

F&E funds will be used for technical support services during preparation of specification and procurement request for GPS integrity monitor system. R,E&D funds are required for Washington and Technical Center costs to support validation tests of the GPS integrity monitor system concept, and for additional examinations of LORAN/GPS interoperability.

Advanced Automation System (AAS) F&E	- $556.3 million
Research, Engineering & Development	- $ 5.0 million

R,E&D funding is requested for FAA in-house costs associated with managing the AAS program. F&E funding is requested for the acquisition contract and related support and implementation activities.

Voice Switching and Control System (VSCS) F&E	- $185.1 million
Research, Engineering & Development	- $ 1.1 million

R,E&D funding is requested for FAA in-house costs associated with managing the VSCS program. F&E funding is requested for the acquisition contract and related support and implementation activities.

Management and Control F&E	- $ 4.0 million
Research, Engineering & Development	- $ 3.1 million

R,E&D funding is requested for contract support of R,E&D oversight activities. F&E funding is requested for contract support of F&E oversight activities.

National Airspace Data Interchange Network (NADIN) II F&E	- $ 4.5 million
Research, Engineering & Development	- $ .2 million

The R,E&D funds are requested to perform modeling studies of NADIN II network evolution and to continue the analysis necessary to establish expansion sizing requirements. F&E funding will be utilized for NADIN II Phase I acquisition.

AIRPORT IMPROVEMENT PROGRAM

SENATOR LAUTENBERG: You indicate that, at the end of fiscal year 1990, you will have an unobligated balance of $968,787,000 in contract authority. Will any of this contract authority lapse at the end of the current fiscal year?

ANSWER: Some of the prior carryover entitlement funds may lapse, but we will not know until the end of fiscal year 1990.

SENATOR LAUTENBERG: You are requesting a $1.5 billion obligation ceiling. What dollar amount of applications do you have pending?

ANSWER: We have over $7 billion in pending preapplications.

SENATOR LAUTENBERG: Would you provide a breakdown of your pending applications by airport category?

ANSWER: Pending Applications by Airport Category
(In millions of dollars)

	Number	Amount
Primary/Commercial Service	920	$5,524.8
General Aviation/Reliever	1,380	1,759.9
Total	2,300	$7,284.7

SENATOR LAUTENBERG: Would you indicate for the record the actions taken with regard to the airports identified on page 56-57 of Senate Report 101-121 accompanying the fiscal year 1990 Transportation Appropriations Bill?

ANSWER: All requests for projects from these locations will be carefully considered for funding during this fiscal year. At this stage of the current year program, many of the locations have submitted preapplications and many are being strongly considered for approval. However, a number of the locations will not compete strongly for approval because of very low activity and some are not expected to submit preapplications. More definitive numbers will be available later in the fiscal year, but at this time, we estimate that approximately 60 percent of the locations will receive some funding.

SENATOR LAUTENBERG: In the fiscal year 1990 Conference report, you were directed to allocate up to $12 million from the airport grant program for the purchase of lease of instrument landing systems and approach lighting at a number of airports. Have any funds been made available for this program? If so, how much and to whom?

ANSWER: We are gathering programming data on these airports so that we may determine whether standards are met and develop aggregate program costs. When costs and priorities are established on a national basis, those airports which meet standards will be programmed in priority order up to the $12 million set-aside.

SENATOR LAUTENBERG: Have you made any grants to start construction of new or replacement airports during the current year? If so, would you provide a listing of these airports for the record?

ANSWER: The information follows:

Construct Airport

City, State	Type	Funds
Byron, California	Reliever	$970,000
Gonzales, Louisiana	Reliever	$1,500,000
Ennis, Montana	General Aviation	$3,114,000

SENATOR LAUTENBERG: You indicate that since 1982, the primary airports have received 66.4 percent of your grant funds. How much of your requested fiscal year 1991 program will go to primary airports?

ANSWER: We estimate this to be 65.9 percent.

SENATOR LAUTENBERG: How are your discretionary grant allocations made? For example, what criteria do you use, how do you determine the non-federal share, how do you ensure that your regions are providing uniform information, etc.?

ANSWER: Applications for discretionary funds are evaluated under a project priority system based on the type of work, the airport type, and the type of location served by the airport. For example, a project to restore an existing runway has a higher priority than a project to extend the same runway; a project at a general aviation airport with more than 100 based aircraft would rank higher than a similar project at another GA airport with, say, 50 aircraft; and if two similar airports propose similar projects, the airport located within the area of a large hub would have a higher priority than one associated with a small hub location.

Priority ranking factors are applied within each of the statutorily-established discretionary funding categories, e.g., reliever airports, non-primary commercial service airports, and noise compatibility projects. Noise projects, for example, are evaluated on the basis of the severity of the noise impact in the vicinity of the airport.

The non-Federal share is equal to the total project cost minus the Federal share of allowable project costs. The Federal share of project costs is specified in section 510 of the Airport and Airway Improvement Act. Briefly, the specified Federal share is 90 percent of the allowable project costs, except that at large primary airports (those enplaning more than 1/4 of one percent of the total number of passengers enplaned nationally) the Federal share is 75 percent. The statute also directs that the Federal share may be as high as 93.75 percent in States where public lands make up a substantial proportion of total land area. (The Federal share of allowable project costs for construction of a passenger terminal at a primary airport is 75 percent, but such projects are not eligible for discretionary funding.)

The Federal share of allowable costs for noise compatibility projects is set by section 104 of the Aviation Safety and Noise Abatement Act at either 80 percent or the percent applicable to airport development projects at that airport, whichever is higher. In no case is the FAA authorized to alter the federal share of allowable project costs in an eligible AIP project.

Regional Airports offices are provided with standardized guidance in FAA Order 5100.38A, Airport Improvement Program (AIP) Handbook. Timely interim guidance for information which is needed between formal revisions to the Handbook is distributed in a system of program guidance letters (PGL's). As many as 10 to 12 PGL's may be distributed each year.

SENATOR LAUTENBERG: You state that safety and security are foremost in determining the use of grant funds. Last year, you listed a number of pending applications for safety and security projects. Would you indicate for the record which, if any, of these applications were not funded and the reasons why they were not?

ANSWER: The following locations were not funded:

City, Airport	Reason for Not Funding
Miami, International	Will be considered this year.
Pensacola, Int'l.	Entitlement used for other development. No discretionary available.
Detroit, Metro	Partially funded. Balance to be considered this year.
Laurel-Hattiesburg, Reg.	Security program approved this year. Awaiting revised preapplication.

SENATOR LAUTENBERG: Please provide for the record a listing of your pending applications for safety and security projects.

ANSWER: The listing follows.

Pending Safety and Security Applications

AIP Requests including Work Priority A
(Priority A Items are Underlined)

Airport City State	Federal Funds Requested	Work Description
International Huntsville Alabama	$ 381,600	Acquire security vehicle; install terminal closed circuit TV monitors
Cold Bay Cold Bay Alaska	328,125	Acquire aircraft rescue and fire fighting vehicle
Iliamna Iliamna Alaska	159,375	Acquire aircraft rescue and fire fighting vehicle
International Ketchikan Alaska	485,000	Acquire aircraft rescue and fire fighting vehicle
International San Jose California	265,947	Acquire aircraft rescue and fire fighting vehicle
Hartford Brainard Hartford Connecticut	130,500	Acquire aircraft rescue and fire fighting vehicle
International Windsor Locks Connecticut	750,000	Install security system
SW Regional Fort Myers Florida	717,000	Acquire aircraft rescue and fire fighting hot pit equipment; install security system
International Jacksonville Florida	1,184,000	Install security systems

International Miami Florida	1,500,000	Install security systems
Panama City-Bay County Panama City Florida	31,000	Acquire aircraft rescue and fire fighting equipment
Regional Pensacola Florida	90,000	Modify marking/lighting Part 139 standards
Sarasota-Bradenton Sarasota Florida	1,526,000	Acquire security equipment and rapid intervention vehicle
Regional Tallahassee Florida	121,000	Regroove runway
International Tampa Florida	2,295,000	Install security fencing and security system
Athens-Ben Epps Athens Georgia	45,000	Groove runway
Metropolitan Columbus Georgia	363,150	Install security improvements
Regional Macon Georgia	473,760	Install distance-to-go markers; acquire aircraft rescue and fire fighting vehicle
International Agana Guam	651,165	Install security system
Lihue Lihue Hawaii	176,250	Acquire aircraft rescue and fire fighting vehicle
Ryan Field Baton Rouge Louisiana	292,500	Acquire security equipment
Regional Lafayette Louisiana	244,260	Acquire security equipment
International New Orleans Louisiana	1,770,000	Rehabilitate aircraft rescue and fire fighting vehicle; acquire security system, Phase II; seal coat runways and taxiways
Regional Shreveport Louisiana	1,102,950	Install security system
International Baltimore Maryland	169,500	Install security access system, Phase II
Various Locations Michigan	150,300	Develop security improvement implementation plan
Detroit City Detroit Michigan	3,500,000	Land; relocation assistance; hazard removal
Metropolitan Detroit Michigan	2,285,921	Acquire security equipment; and install security system, Phase II

Municipal Lansing Michigan	359,024	Install security fencing
Pine Belt Regional Laurel-Hattiesburg Mississippi	328,968	Apply porous friction course
Municipal Lincoln Nebraska	405,000	Install security system
Eppley Airfield Omaha Nebraska	495,000	Install security system
Regional Farmington New Mexico	581,636	Acquire aircraft rescue and fire fighting vehicle; master plan update
Municipal Monticello New York	270,000	Acquire aircraft rescue and fire fighting vehicle
International Syracuse New York	262,500	Acquire aircraft rescue and fire fighting vehicle
International Greensboro North Carolina	765,000	Acquire aircraft rescue and fire fighting vehicles
Jetport Kinston North Carolina	90,000	Install security improvements
Raleigh-Durham Raleigh North Carolina	46,875	Construct road to aircraft rescue and fire fighting building
International Pittsburgh Pennsylvania	3,712,000	Construct aircraft rescue and fire fighting building
Regional Florence South Carolina	30,000	Install taxiway signs
McKellar Field Jackson Tennessee	99,000	Acquire aircraft rescue and fire fighting vehicle
International Memphis Tennessee	4,091,430	Install security improvements
Metropolitan Nashville Tennessee	363,750	Acquire aircraft rescue and fire fighting vehicle
Municipal Austin Texas	822,750	Acquire aircraft rescue and fire fighting vehicle and safety equipment; install security system
International Corpus Christi Texas	468,459	Install security fencing; construct road
Intercontinental Houston Texas	600,000	Acquire aircraft rescue and fire fighting vehicles
William Hobby Houston Texas	1,521,000	Install security system

SENATOR LAUTENBERG: Update the status of the new airport grant applications.

ANSWER:

Preapplications on File for New Airports
(Other than Commercial Service)

	Amounts Requested In Millions
Piedmont, Alabama	$ 2.4
Council 2, Alaska	.3
Wasilla, Alaska	3.8*
Calico Rock, Arkansas	1.2
Melbourne, Arkansas	3.3*
Byron, California	8.1
Hollywood, Florida	39.9
Jupiter, Florida	12.7*
Thomaston, Georgia	4.1
Burkesville, Kentucky	4.4
Georgetown, Kentucky	6.2
Gonzales, Louisiana	4.8*
Ruston, Louisiana	.1*
Tallulah, Louisiana	1.5*
Alma, Nebraska	1.0
Nebraska City, Nebraska	.7
Boulder City, Nevada	.6*
Harrisburg, Pennsylvania	.8
Garland, Texas	.8*
LaGrange, Texas	1.1*
Monticello, Utah	2.1
Colville, Washington	.4
Spencer, West Virginia	6.0
Total	$106.3

*Projects started, request partially funded.

SENATOR LAUTENBERG: Provide a breakdown of a fiscal year 1991 $1.5 billion program level with and without a separate $100 million set-aside for capacity.

ANSWER: Two separate breakdowns follows.

Proposed AIP Funding for FY 1991

Assumes: $610M full formula entitlements
$120M carryover
$100M set-aside for Capacity/Safety/Security/Noise projects

Regular Appropriation Limitation	$1,400,000,000
Primary Airports	610,000,000
Cargo	42,000,000
Alaska Supplemental	10,300,000
States	168,000,000
Subtotal Entitlements	$830,300,000

Noise	140,000,000
Relievers	140,000,000
Commercial Service	35,000,000
System Planning	7,000,000
Carryover Entitlements	120,000,000
Capacity/Safety/Security/Noise	95,775,000
Remaining Discretionary	31,925,000
Subtotal Discretionary	$569,700,000
Set-aside foro Capacity/Safety/Security/Noise	$100,000,000
GRAND TOTAL	$1,500,000,000

May not add due to rounding

Proposed AIP Funding for FY 1991

Assumes: $610M full formula entitlements
$120M carryover
No set-aside for Capacity/Safety/Security/Noise projects

Regular Appropriation Limitation	$1,500,000,000
Primary Airports	610,000,000
Cargo	45,000,000
Alaska Supplemental	10,300,000
States	180,000,000
Subtotal Entitlements	$845,300,000
Noise	150,000,000
Relievers	150,000,000
Commercial Service	37,500,000
System Planning	7,500,000
Carryover Entitlements	120,000,000
Capacity/Safety/Security/Noise	142,275,000
Remaining Discretionary	47,425,000
Subtotal Discretionary	$654,700,000
Set-aside for Capacity/Safety/Securtiy/Noise	$0
GRAND TOTAL	*$1,500,000,000

*May not add due to internal rounding

SENATOR LAUTENBERG: Provide for the record a listing of the fiscal year 1989 and 1990 to date discretionary grants in excess of $2 million, indicating the airport, amount and purpose of the grant?

ANSWER: The listing follows.

AIRPORT IMPROVEMENT PROGRAM
DISCRETIONARY FUNDS

FISCAL YEAR(S) 90
FUNDING LIMIT GT 002000000

LOCATION/ AIRPORT	WORK DESCRIPTION	DISCRETIONARY PORTION	TOTAL FEDERAL FUNDS
ARIZONA			
BULLHEAD CITY BULLHEAD CITY/ LAUGHLIN	CONSTRUCT AIRPORT (PHASE III SITE PREPARATION); ACQUIRE LAND FOR DEVELOPMENT AND APPROACHES	$2,500,000	$2,800,000
LAKE HAVASU CITY LAKE HAVASU CITY	CONSTRUCT AIRCRAFT RESCUE AND FIRE FIGHTING AND TERMINAL BUILDINGS, RUNWAY, TAXIWAYS AND APRON; INSTALL RUNWAY AND TAXIWAY LIGHTING, TAXIWAY SIGNS, VISUAL APPROACH AIDS, AIRPORT BEACON AND WEATHER REPORTING EQUIPMENT	$2,900,000	$2,900,000
	SUB TOTALS	$5,400,000	$5,700,000
CALIFORNIA			
OAKLAND METROPOLITAN OAKLAND INTERNATIONAL	RECONSTRUCT RUNWAY, RUNWAY SAFETY AREA, TAXIWAY, APRON AND SERVICE ROAD; REHABILITATE RUNWAY AND TAXIWAY LIGHTING	$8,000,000	$8,000,000
	SUB TOTALS	$8,000,000	$8,000,000
FLORIDA			
FORT LAUDERDALE FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL	ACQUIRE LAND FOR NOISE COMPATIBILITY; PROVIDE RELOCATION ASSISTANCE	$3,000,000	$3,000,000
FORT LAUDERDALE FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL	ACQUIRE LAND FOR NOISE COMPATIBILITY	$2,010,000	$2,010,000
	SUB TOTALS	$5,010,000	$5,010,000
GEORGIA			
ATLANTA FULTON COUNTY-BROWN FIELD	ACQUIRE LAND FOR DEVELOPMENT	$2,500,000	$2,500,000
ATLANTA WILLIAM B HARTSFIELD-ATLANTA INTL	SOUNDPROOF RESIDENCES; ACQUIRE LAND FOR NOISE COMPATIBILITY	$7,150,000	$23,927,139
PEACHTREE CITY FALCON FIELD	CONSTRUCT AND LIGHT RUNWAY, TAXIWAY AND APRON; CONSTRUCT DRAINAGE; ACQUIRE LAND FOR DEVELOPMENT; ACQUIRE EXISTING AIRPORT; RELOCATE UTILITIES (PHASE II)	$2,126,667	$2,126,667
	SUB TOTALS	$11,776,667	$28,553,806

LOCATION/ AIRPORT	WORK DESCRIPTION	DISCRETIONARY PORTION	TOTAL FEDERAL FUNDS
ILLINOIS			
STATE OF ILLINOIS BLOCK GRANT	VARIOUS AIRPORT DEVELOPMENT PROJECTS AT NONPRIMARY AIRPORTS UNDER THE STATE BLOCK GRANT PILOT PROGRAM	$15,746,000	$20,891,045
	SUB TOTALS	$15,746,000	$20,891,045
KENTUCKY			
COVINGTON GREATER CINCINNATI INTERNATIONAL	CONSTRUCT RUNWAY 18L-36R, PHASE 3 (LOI)	$8,000,000	$12,300,428
	SUB TOTALS	$8,000,000	$12,300,428
MISSOURI			
STATE OF MISSOURI BLOCK GRANT	VARIOUS AIRPORT DEVELOPMENT PROJECTS AT NONPRIMARY AIRPORTS UNDER THE STATE BLOCK GRANT PILOT PROGRAM	$7,011,000	$10,178,385
	SUB TOTALS	$7,011,000	$10,178,385
NEVADA			
LAS VEGAS MC CARRAN INTERNATIONAL	ACQUIRE LAND FOR NOISE COMPATIBILITY	$3,000,000	$3,000,000
	SUB TOTALS	$3,000,000	$3,000,000
NEW YORK			
BINGHAMTON LINK FIELD-BROOME COUNTY	OVERLAY AND EXTEND RUNWAY (PHASE IV); CONSTRUCT TAXIWAY	$4,731,098	$5,626,790
	SUB TOTALS	$4,731,098	$5,626,790
NORTH CAROLINA			
STATE OF NORTH CAROLINA BLOCK GRANT	VARIOUS AIRPORT DEVELOPMENT PROJECTS AT NONPRIMARY AIRPORTS UNDER THE STATE BLOCK GRANT PILOT PROGRAM	$5,156,000	$8,291,250
	SUB TOTALS	$5,156,000	$8,291,250
TENNESSEE			
MEMPHIS MEMPHIS INTERNATIONAL	ACQUIRE LAND FOR NOISE COMPATIBILITY; PROVIDE RELOCATION ASSISTANCE (NOISE LAND)	$5,000,000	$12,463,692

LOCATION/ AIRPORT	WORK DESCRIPTION	DISCRETIONARY PORTION	TOTAL FEDERAL FUNDS
NASHVILLE NASHVILLE METROPOLITAN	SOUNDPROOF RESIDENCES; ACQUIRE LAND FOR NOISE COMPATIBILITY; PROVIDE RELOCATION ASSISTANCE (NOISE LAND)	$5,450,000	$5,450,000
	SUB TOTALS	$10,450,000	$17,913,692
VIRGIN ISLANDS			
CHARLOTTE AMALIE CYRIL E KING	INSTALL SECURITY FENCE; CONSTRUCT TAXIWAY AND ACCESS ROADS	$5,000,000	$5,889,000
	SUB TOTALS	$5,000,000	$5,889,000
WISCONSIN			
WAUKESHA WAUKESHA COUNTY	ACQUIRE LAND FOR APPROACHES; PROVIDE RELOCATION ASSISTANCE	$2,398,500	$2,398,500
	SUB TOTALS	$2,398,500	$2,398,500
	GRAND TOTALS	$91,679,265	$133,752,896

AIRPORT IMPROVEMENT PROGRAM
DISCRETIONARY FUNDS

FISCAL YEAR(S) 89
FUNDING LIMIT GT 002000000

LOCATION/ AIRPORT	WORK DESCRIPTION	DISCRETIONARY PORTION	TOTAL FEDERAL FUNDS
ALASKA			
JUNEAU JUNEAU INTERNATIONAL	CONSTRUCT TAXIWAYS; APRON AND ACCESS ROAD; INSTALL TAXIWAY LIGHTING	$2,198,722	$7,243,337
	SUB TOTALS	$2,198,722	$7,243,337
ARIZONA			
BULLHEAD CITY BULLHEAD CITY/ LAUGHLIN	CONSTRUCT NEW AIRPORT (PHASE II SITE PREPARATION); ACQUIRE LAND FOR DEVELOPMENT AND APPROACHES	$2,500,000	$2,800,000
LAKE HAVASU CITY LAKE HAVASU CITY	LIGHT OBSTRUCTIONS; INSTALL SECURITY FENCING; CONSTRUCT ACCESS ROAD AND DRAINAGE; INSTALL AND RELOCATE UTILITIES	$3,000,000	$3,000,000
PHOENIX PHOENIX SKY HARBOR INTERNATIONAL	CONSTRUCT AND LIGHT APRON	$9,000,000	$12,178,729

LOCATION/ AIRPORT	WORK DESCRIPTION	DISCRETIONARY PORTION	TOTAL FEDERAL FUNDS
PHOENIX PHOENIX SKY HARBOR INTERNATIONAL	ACQUIRE LAND FOR NOISE COMPATIBILITY; PROVIDE RELOCATION ASSISTANCE (NOISE LAND)	$3,000,000	$3,000,000
	SUB TOTALS	$17,500,000	$20,978,729
ARKANSAS			
LITTLE ROCK ADAMS FIELD	STRENGTHEN RUNWAY AND TAXIWAYS; INSTALL RUNWAY AND TAXIWAY LIGHTING	$7,400,000	$7,400,000
NORTH LITTLE ROCK NORTH LITTLE ROCK MUNICIPAL	CONSTRUCT RUNWAY AND TAXIWAYS (PHASE I); INSTALL RUNWAY LIGHTING AND VISUAL APPROACH AID	$2,650,000	$2,650,000
	SUB TOTALS	$10,050,000	$10,050,000
CALIFORNIA			
BURBANK BURBANK-GLENDALE-PAADENA	SOUNDPROOF SCHOOL (BURBANK)	$2,500,000	$2,500,000
BURBANK BURBANK-GLENDALE-PAADENA	ACQUIRE LAND FOR DEVELOPMENT	$5,600,000	$5,600,000
LIVERMORE LIVERMORE MUNICIPAL	CONSTRUCT, EXTEND AND OVERLAY TAXIWAYS; EXPAND APRON; INSTALL RUNWAY AND TAXIWAY SIGNS; INSTALL VISUAL APPROACH AIDS; ACQUIRE LAND FOR APPROACHS; INSTALL FENCING	$2,268,000	$2,268,000
LOS ANGELES LOS ANGELES INTERNATIONAL	ACQUIRE LAND FOR NOISE COMPATIBLITY; PROVIDE RELOCATION ASSISTANCE (NOISE LAND)	$3,000,000	$3,000,000
SANTA ANA JOHN WAYNE/ORANGE COUNTY	ACQUIRE AIRCRAFT RESCUE AND FIRE FIGHTING VEHICLES; CONSTRUCT AND WIDEN TAXIWAYS; CONSTRUCT SERVICE ROAD; IMPROVE DRAINAGE (PHASE II)	$3,250,000	$3,250,000
VAN NUYS VAN NUYS	RELOCATE, RECONSTRUCT AND LIGHT TAXIWAY; INSTALL TAXIWAY SIGNS; RELOCATE SERVICE ROAD	$2,148,300	$2,148,300
	SUB TOTALS	$18,766,300	$18,766,300
COLORADO			
DENVER DENVER INTERNATIONAL (NEW)	CONSTRUCT RUNWAY AND TERMINAL AREA (SITE PREPARATION); CONSTRUCT TERMINAL BUILDING (DESIGN ONLY); ACQUIRE LAND FOR DEVELOPMENT; PROVIDE RELOCATION ASSISTANCE	$25,803,641	$60,000,000

LOCATION/ AIRPORT	WORK DESCRIPTION	DISCRETIONARY PORTION	TOTAL FEDERAL FUNDS
DENVER FRONT RANGE	ACQUIRE LAND FOR DEVELOPMENT; PROVIDE RELOCATION ASSISTANCE	$2,636,893	$2,636,893
	SUB TOTALS	$28,440,534	$62,636,893
CONNECTICUT			
DANBURY DANBURY MUNICIPAL	REHABILITATE AND GROOVE RUNWAY; IMPROVE DRAINAGE	$3,615,378	$3,677,400
	SUB TOTALS	$3,615,378	$3,677,400
FLORIDA			
FORT LAUDERDALE FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL	RECONSTRUCT, OVERLAY AND EXTEND RUNWAY AND TAXIWAYS (PHASE I)	$3,278,000	$3,278,000
FORT LAUDERDALE FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL	CONSTRUCT NOISE BARRIER	$4,000,000	$4,000,000
JUPITER NORTH PALM BEACH COUNTY (NEW)	CONSTRUCT NEW AIRPORT (PHASE I); ACQUIRE LAND FOR DEVELOPMENT	$3,680,000	$3,680,000
MIAMI OPA LOCKA	OVERLAY AND GROOVE RUNWAY; RELOCATE RUNWAY LIGHTING; REHABILITATE VAULT	$2,162,000	$2,162,000
ORLANDO ORLANDO INTERNATIONAL	CONSTRUCT AND LIGHT APRON (PHASE I)	$5,000,000	$5,273,000
ORLANDO ORLANDO INTERNATIONAL	RECONSTRUCT AND LIGHT RUNWAY AND TAXIWAYS; CONSTRUCT AND LIGHT TAXIWAYS AND APRON (PHASE III)	$4,690,000	$4,690,000
SARASOTA SARASOTA-BRADENTON	REHABILITATE AND GROOVE RUNWAY	$2,400,000	$2,400,000
TAMPA TAMPA INTERNATIONAL	CONSTRUCT, RECONSTRUCT, EXTEND AND LIGHT TAXIWAYS; EXPAND AND LIGHT APRON; CONSTRUCT SERVICE ROAD	$4,500,000	$8,918,500
WEST PALM BEACH PALM BEACH INTERNATIONAL	ACQUIRE LAND FOR NOISE COMPATIBILITY; PROVIDE RELOCATION ASSISTANCE (NOISE LAND)	$3,000,000	$3,000,000
WEST PALM BEACH PALM BEACH INTERNATIONAL	ACQUIRE LAND FOR NOISE COMPATIBILITY; PROVIDE RELOCATION ASSISTANCE (NOISE LAND)	$4,738,743	$6,113,000
	SUB TOTALS	$37,448,743	$43,514,500

LOCATION/ AIRPORT	WORK DESCRIPTION	DISCRETIONARY PORTION	TOTAL FEDERAL FUNDS
GEORGIA			
ATLANTA FULTON COUNTY-BROWN FIELD	REMOVE OBSTRUCTIONS; ACQUIRE LAND FOR APPROACHES; PROVIDE RELOCATION ASSISTANCE	$3,255,639	$3,255,639
ATLANTA THE WILLIAM B HARTSFIELD-ATLANTA INTL	SOUNDPROOF RESIDENCES; ACQUIRE LAND FOR NOISE COMPATIBILITY	$8,000,000	$24,852,760
ATLANTA THE WILLIAM B HARTSFIELD-ATLANTA INTL	CONSTRUCT APRON; INSTALL TAXIWAY LIGHTING	$2,085,211	$2,085,211
PEACHTREE CITY FALCON FIELD	ACQUIRE EXISTING AIRPORT (PHASE I); CONSTRUCT AND LIGHT RUNWAY, TAXIWAY AND APRON; CONSTRUCT DRAINAGE; ACQUIRE LAND FOR DEVELOPMENT	$2,126,666	$2,126,666
	SUB TOTALS	$15,467,516	$32,320,276
ILLINOIS			
ALTON CIVIC MEMORIAL	CONDUCT MASTER PLAN UPDATE; REMOVE OBSTRUCTIONS; EXTEND AND LIGHT RUNWAY AND TAXIWAY; RELOCATE PUBLIC ROAD; ACQUIRE LAND FOR APPROACHES	$2,964,720	$2,964,720
CHICAGO CHICAGO MIDWAY	REMOVE OBSTRUCTIONS; ACQUIRE AIRCRAFT RESCUE AND FIRE FIGHTING VEHICLE; REHABILITATE RUNWAY; CONSTRUCT TAXIWAYS; RELOCATE ACCESS ROAD	$7,000,000	$17,754,476
CHICAGO/WEST CHICAGO DU PAGE COUNTY	CONSTRUCT AND LIGHT RUNWAYS, TAXIWAYS AND APRON; RELOCATE UTILITIES, PUBLIC ROAD AND RAILROAD TRACK; ACQUIRE LAND FOR DEVELOPMENT AND APPROACHES	$10,000,000	$10,000,000
	SUB TOTALS	$19,964,720	$30,719,196
INDIANA			
FORT WAYNE FORT WAYNE MUNICIPAL/BAER FIELD	RECONSTRUCT RUNWAY; REHABILITATE RUNWAY LIGHTING; REPLACE WETLAND (ENVIRONMENTAL MITIGATION)	$3,101,095	$4,118,760
INDIANAPOLIS INDIANAPOLIS INTERNATIONAL	ACQUIRE LAND FOR NOISE COMPATIBILITY; PROVIDE RELOCATION ASSISTANCE	$3,200,000	$3,200,000
INDIANAPOLIS INDIANAPOLIS INTERNATIONAL	INSTALL INSTRUMENT LANDING SYSTEMS; ACQUIRE LAND FOR NAVAIDS	$3,324,000	$3,324,000

LOCATION/ AIRPORT	WORK DESCRIPTION	DISCRETIONARY PORTION	TOTAL FEDERAL FUNDS
INDIANAPOLIS INDIANAPOLIS INTERNATIONAL	CONSTRUCT AND LIGHT RUNWAY AND TAXIWAYS (PHASE III)	$7,000,000	$7,000,000
TERRE HAUTE HULMAN REGIONAL	OVERLAY AND GROOVE RUNWAY; WIDEN AND OVERLAY TAXIWAY; INSTALL FENCING	$2,118,600	$2,118,600
	SUB TOTALS	$18,743,695	$19,761,360
KENTUCKY			
COVINGTON GREATER CINCINNATI INTERNATIONAL	INSTALL INSTRUMENT APPROACH AIDS	$2,700,000	$2,700,000
	SUB TOTALS	$2,700,000	$2,700,000
LOUISIANA			
NEW ORLEANS NEW ORLEANS INTERNATIONAL/ MOISANT FIELD	REMOVE OBSTRUCTIONS; ACQUIRE LAND FOR NOISE COMPATIBILITY; PROVIDE RELOCATION ASSISTANCE (NOISE LAND)	$3,600,000	$3,600,000
	SUB TOTALS	$3,600,000	$3,600,000
MARYLAND			
BALTIMORE BALTIMORE-WASHINGTO INTERNATIONAL	IMPROVE SECURITY SYSTEM; REMOVE OBSTRUCTIONS; RECONSTRUCT AND EXTEND RUNWAY; CONSTRUCT TAXIWAYS AND ACCESS ROAD; ACQUIRE LAND FOR APPROACHES	$9,349,203	$9,444,370
	SUB TOTALS	$9,349,203	$9,444,370
MICHIGAN			
DETROIT DETROIT CITY	REMOVE OBSTRUCTIONS; ACQUIRE LAND FOR APPROACHES; PROVIDE RELOCATION ASSISTANCE	$2,467,800	$2,467,800
	SUB TOTALS	$2,467,800	$2,467,800
MISSOURI			
KANSAS CITY KANSAS CITY INTERNATIONAL	CONSTRUCT RUNWAY AND TAXIWAY (PHASE II)	$4,400,000	$4,400,000
ST LOUIS LAMBERT-ST LOUIS INTERNATIONAL	ACQUIRE LAND FOR NOISE COMPATIBILITY; SOUNDPROOF SCHOOLS (ST. LOUIS)	$4,000,000	$9,000,000
ST LOUIS LAMBERT-ST LOUIS INTERNATIONAL	OVERLAY RUNWAY; RECONSTRUCT TAXIWAY; EXPAND APRON; IMPROVE ACCESS ROAD	$3,750,000	$7,421,147

LOCATION/ AIRPORT	WORK DESCRIPTION	DISCRETIONARY PORTION	TOTAL FEDERAL FUNDS
ST LOUIS LAMBERT-ST LOUIS INTERNATIONAL	ACQUIRE LAND FOR NOISE COMPATIBILITY	$2,500,000	$2,500,000
ST LOUIS SPIRIT OF ST LOUIS	SEAL COAT TAXIWAY; INSTALL TAXIWAY LIGHTING; ACQUIRE LAND FOR APPROACHES	$2,949,300	$2,949,300
	SUB TOTALS	$17,599,300	$26,270,447
NEVADA			
LAS VEGAS MC CARRAN INTERNATIONAL	ACQUIRE LAND FOR NOISE COMPATIBILITY	$3,000,000	$3,000,000
LAS VEGAS MC CARRAN INTERNATIONAL	CONSTRUCT RUNWAY AND TAXIWAYS (SITE PREPARATION); CONSTRUCT AND EXTEND TAXIWAYS; RECONSTRUCT APRON; INSTALL TAXIWAY LIGHTING AND RUNWAY AND TAXIWAY SIGNS	$6,500,000	$13,035,836
LAS VEGAS MC CARRAN INTERNATIONAL	~~CONSTRUCT AND~~ RECONSTRUCT RUNWAYS AND TAXIWAYS; CONSTRUCT, RECONSTRUCT AND EXPAND APRONS; INSTALL RUNWAY AND TAXIWAY LIGHTING; ACQUIRE LAND FOR DEVELOPMENT; RELOCATE PUBLIC ROAD; IMPROVE DRAINAGE (PHASE I)	$6,000,000	$6,000,000
LAS VEGAS NORTH LAS VEGAS AIR TERMINAL	RECONSTRUCT, OVERLAY AND EXTEND RUNWAY; INSTALL RUNWAY AND TAXIWAY LIGHTING; CONSTRUCT SERVICE ROAD; IMPROVE DRAINAGE	$3,000,000	$3,000,000
	SUB TOTALS	$18,500,000	$25,035,836
NEW HAMPSHIRE			
KEENE DILLANT-HOPKINS	RECONSTRUCT AND LIGHT RUNWAY; CONSTRUCT TAXIWAY; INSTALL VISUAL APPROACH AIDS	$2,856,137	$2,856,137
	SUB TOTALS	$2,856,137	$2,856,137
NEW JERSEY			
NEWARK NEWARK INTERNATIONAL	GROOVE RUNWAY; REHABILITATE RUNWAY; REPLACE RUNWAY CENTERLINE AND TOUCH DOWN ZONE LIGHTING	$4,052,715	$4,052,715
	SUB TOTALS	$4,052,715	$4,052,715
NEW YORK			
BATAVIA GENESEE COUNTY	WIDEN RUNWAY; IMPROVE DRAINAGE (DESIGN ONLY)	$2,241,000	$2,241,000

LOCATION/ AIRPORT	WORK DESCRIPTION	DISCRETIONARY PORTION	TOTAL FEDERAL FUNDS
BINGHAMTON LINK FIELD-BROOME COUNTY	OVERLAY, EXTEND AND LIGHT RUNWAY (PHASE III); CONSTRUCT TAXIWAY	$4,900,000	$5,775,439
BUFFALO GREATER BUFFALO INTERNATIONAL	ACQUIRE LAND FOR APPROACHES	$6,181,619	$10,957,140
MASSENA RICHARDS FIELD	REMOVE OBSTRUCTIONS; OVERLAY RUNWAY; RELOCATE RUNWAY LIGHTS; RELOCATE SERVICE ROAD	$2,163,600	$2,163,600
NEW YORK JOHN F KENNEDY INTERNATIONAL	RELOCATE TAXIWAYS	$6,200,285	$11,216,487
NEWBURGH STEWART INTERNATIONAL	ACQUIRE AIRCRAFT RESCUE AND FIRE FIGHTING VEHICLE; EXPAND APRON; ACQUIRE SNOW REMOVAL EQUIPMENT	$3,237,018	$3,237,018
NIAGARA FALLS NIAGARA FALLS INTERNATIONAL	RECONSTRUCT AND LIGHT TAXIWAYS; INSTALL RUNWAY AND TAXIWAY SIGNS	$2,643,331	$2,643,331
	SUB TOTALS	$27,566,853	$38,234,045
OHIO ------------------			
CLEVELAND CLEVELAND - HOPKINS INTERNATIONAL	REHABILITATE RUNWAY AND TAXIWAYS AND LIGHTING	$6,260,000	$13,458,945
COLUMBUS PORT COLUMBUS INTERNATIONAL	INSTALL NOISE SUPPRESSION EQUIPMENT AND NOISE MONITORING SYSTEM; SOUNDPROOF RESIDENCES (PHASE I); SOUNDPROOF SCHOOLS (PHASE II) (COLUMBUS)	$2,200,000	$2,200,000
COLUMBUS PORT COLUMBUS INTERNATIONAL	WIDEN AND LIGHT TAXIWAYS; CONSTRUCT APRON; REHABILITATE APRON; IMPROVE TERMINAL BUILDING	$3,980,000	$6,259,477
COLUMBUS RICKENBACKER	SOUNDPROOF SCHOOLS (GROVEPORT)	$3,000,000	$3,000,000
WILLOUGHBY LOST NATION	REMOVE OBSTRUCTIONS; REHABILITATE RUNWAY; CONSTRUCT TAXIWAYS, APRON AND ACCESS ROAD	$2,188,000	$2,188,000
	SUB TOTALS	$17,628,000	$27,106,422
PENNSYLVANIA ------------------			
PHILADELPHIA PHILADELPHIA INTERNATIONAL	OVERLAY RUNWAY (PHASE I); EXTEND TAXIWAYS	$3,578,000	$10,257,000
PHILADELPHIA PHILADELPHIA INTERNATIONAL	CONSTRUCT TERMINAL ACCESS ROAD (PHASE II)	$3,505,000	$3,505,000

LOCATION/ AIRPORT	WORK DESCRIPTION	DISCRETIONARY PORTION	TOTAL FEDERAL FUNDS
PITTSBURGH GREATER PITTSBURGH INTERNATIONAL	CONSTRUCT TAXIWAYS AND APRON (NEW MIDFIELD TERMINAL)	$10,000,000	$10,000,000
	SUB TOTALS	$17,083,000	$23,762,000
SOUTH CAROLINA			
COLUMBIA COLUMBIA METROPOLITAN	REHABILITATE AND EXTEND RUNWAY AND TAXIWAYS; INSTALL RUNWAY SIGNS	$2,538,825	$2,603,996
	SUB TOTALS	$2,538,825	$2,603,996
TENNESSEE			
KNOXVILLE MC GHEE TYSON	EXTEND AND LIGHT RUNWAY AND TAXIWAY	$4,000,000	$4,000,000
MEMPHIS MEMPHIS INTERNATIONAL	ACQUIRE LAND FOR NOISE COMPATIBILITY	$6,000,000	$14,197,146
MEMPHIS MEMPHIS INTERNATIONAL	INSTALL INSTRUMENT APPROACH AID	$2,845,886	$2,845,886
NASHVILLE NASHVILLE METROPOLITAN	INSTALL INSTRUMENT APPROACH AID	$4,353,190	$4,353,190
NASHVILLE NASHVILLE METROPOLITAN	CONSTRUCT RUNWAY (PHASE V)	$6,000,000	$6,000,000
	SUB TOTALS	$23,199,076	$31,396,222
TEXAS			
AUSTIN NEW	CONDUCT MASTER PLAN STUDY; ACQUIRE LAND FOR DEVELOPMENT AND CONSTRUCT AIRPORT (PHASE II)	$10,000,000	$10,000,000
AUSTIN NEW	ACQUIRE LAND FOR DEVELOPMENT AND CONSTRUCT AIRPORT (PHASE III)	$5,000,000	$5,000,000
FORT WORTH FORT WORTH ALLIANCE (NEW)	ACQUIRE LAND FOR DEVELOPMENT AND APPROACHES; CONSTRUCT AIRPORT (PHASE II)	$21,000,000	$21,000,000
FORT WORTH FORT WORTH ALLIANCE (NEW)	ACQUIRE LAND FOR DEVELOPMENT AND APPROACHES; CONSTRUCT AIRPORT (PHASE III)	$3,000,000	$3,000,000
	SUB TOTALS	$39,000,000	$39,000,000
UTAH			
SALT LAKE CITY SALT LAKE CITY INTERNATIONAL	INSTALL INSTRUMENT APPROACH AID	$3,000,000	$3,000,000
	SUB TOTALS	$3,000,000	$3,000,000

LOCATION/ AIRPORT	WORK DESCRIPTION	DISCRETIONARY PORTION	TOTAL FEDERAL FUNDS
VIRGIN ISLANDS			
CHARLOTTE AMALIE CYRIL E KING	RECONSTRUCT SECURITY GATE; CONSTRUCT APRONS; EXPAND APRON; CONSTRUCT ACCESS ROAD; IMPROVE DRAINAGE	$2,882,000	$2,882,000
	SUB TOTALS	$2,882,000	$2,882,000
WASHINGTON			
SEATTLE BOEING FIELD/KING COUNTY INTERNATIONAL	ACQUIRE LAND FOR APPROACHES; PROVIDE RELOCATION ASSISTANCE	$3,517,317	$3,698,567
SEATTLE SEATTLE-TACOMA INTERNATIONAL	SOUNDPROOF RESIDENCES; ACQUIRE LAND FOR APPROACHES; PROVIDE RELOCATION ASSISTANCE	$2,200,000	$3,200,000
SEATTLE SEATTLE-TACOMA INTERNATIONAL	ACQUIRE LAND FOR NOISE COMPATIBILITY; PROVIDE RELOCATION ASSISTANCE (NOISE LAND)	$3,750,500	$4,600,766
SEATTLE SEATTLE-TACOMA INTERNATIONAL	ACQUIRE LAND FOR NOISE COMPATIBILITY; PROVIDE RELOCATION ASSISTANCE (NOISE LAND)	$5,280,000	$5,280,000
	SUB TOTALS	$14,747,817	$16,779,333
WISCONSIN			
WAUKESHA WAUKESHA COUNTY	OVERLAY AND EXTEND RUNWAY AND TAXIWAY; INSTALL RUNWAY AND TAXIWAY LIGHTING; INSTALL TAXIWAY SIGNS AND VISUAL APPROACH AIDS; ACQUIRE LAND FOR APPROACH	$2,250,000	$2,250,000
	SUB TOTALS	$2,250,000	$2,250,000
	GRAND TOTALS	$383,216,334	$513,109,314

SENATOR LAUTENBERG: In FY 1991, does your AIP request contain enough dollars to accommodate the outstanding LOIs for new airport development without harming other, more immediate discretionary capacity enhancements at existing airports? If those improvements will suffer at the expense of new airports, what AIP dollar figure would fulfill the true need of the currently-planned expansion in FY 1991 and still accommodate the LOI commitments?

ANSWER: The number and dollar amount of requests for projects, including projects for needed capacity enhancements, exceeds the amount of funds requested for the 1991 AIP. However, we plan to consider all high priority needs and will approve funding for all those projects to the extent available. Some locations may not receive the entire amounts requested, but all reasonable options will be considered in order not to harm the capacity of the national system of airports.

SENATOR LAUTENBERG: What is the status of the place-named ILS equipment mandated in last year's appropriation bill? Have you requested adequate funding to accommodate the purchase, installation, testing, and operation of this equipment and any similar equipment being requested for this year?

ANSWER: We are gathering programming data on these airports so that we may determine whether standards are met and develop aggregate program costs. When costs and priorities are established on a national basis, those airports which meet standards will be programmed in priority order up to the $12 million set-aside.

SENATOR LAUTENBERG: Last year, we included language in the Transportation Appropriations bill that required FAA to assume operation and maintenance for AIP-funded ILS equipment. Have you in fact done this? Are there additional ILSs, purchased under AIP, that are not being maintained and operated by FAA? If so, why not?

ANSWER: Yes, there are ILS's, purchased under AIP, that are not being maintained by FAA. The law has been in effect since November 21, 1989. Several questions have been raised by the law and many of these are being reviewed by the Chief Counsel's office at this time.

There are approximately 23 systems that qualify for assumption by FAA at this time. Some of these systems are in the process of being assumed and it is anticipated that the rest will be completed in the near future.

It should be noted that many airports with localizers, or airport lighting systems, or markers, etc., have requested that FAA assume maintenance of these pieces of equipment. Legal counsel has provided an opinion that the law calls for ILS's and not parts of ILS's. This means that only systems that contain a localizer, a glide slope, and a marker constitute an ILS and only this combination (purchased with the assistance of AIP funds) will be accepted by the FAA.

QUESTIONS SUBMITTED BY SENATOR BYRD

MID-ATLANTIC AVIATION TRAINING AND EDUCATION CENTER

SENATOR BYRD: Now that the Senate has included language in the FY 1990 Dire Emergency Supplemental Appropriation bill, which clarifies the intent of Congress regarding the establishment of the Mid-Atlantic Aviation Training and Education Center in Clarksburg, West Virginia, when is the directive included in the FY 1990 Transportation Appropriation bill expected to be fully implemented, assuming that the clarifying language is subsequently enacted into law? Please provide for the record a schedule for implementation, including significant milestone events.

I trust that I may have your assurances that you will keep me fully informed of the status of this project.

ANSWER: With the passage of the Dire Supplemental Bill, HR 4404, giving the FAA the legal authority to award a grant to Fairmont State College to construct, equip, and operate the Mid-Atlantic Aviation Training and Education Center, in Clarksburg, West Virginia, FAA will commence activities to award the grant. FAA staff members have been meeting with representatives of the institution to discuss the proposed project and grant administration procedures. The institution is currently completing an application including a detailed project plan, an itemized budget, and milestones. You can be assured that FAA will award this grant in a timely manner based on the legal authority.

I will keep you informed on the status of the award.

ELKINS FLIGHT SERVICE CENTER

SENATOR BYRD: A flight service center is being built in Elkins, and was originally scheduled for occupancy in November 1989. What is the status of that project? Is the building complete and occupied?

ANSWER: The Elkins Automated Flight Service Station (AFSS) will serve as the flight service facility for the State of West Virginia. The building has been completed. The FAA accepted the building and some personnel have occupied office space within the structure. The facility was scheduled to be commissioned in July 1990. That date has been deferred until February 1991 due to equipment problems.

SENATOR BYRD: What are the specific equipment problems associated with establishing Elkins as a flight service center?

ANSWER: Due to problems experienced by the contractor in developing the Integrated Communications Switching System (ICSS), the Elkins AFSS is now scheduled to be commissioned in February 1991. The contractor recently resolved the production problems and has started to deliver equipment to field facilities. The ICSS equipment will be delivered to Elkins in September 1990.

The ICSS controls the air/ground frequencies and the telephone circuits used by specialists to provide service to pilots. The ICSS provides a pilot direct access feature to transcribed recordings that will contain weather and flight information critical to the safety of flight. It also offers a management information system that can be used to monitor activity volume and conduct traffic analyses.

SENATOR BYRD: What is the latest schedule for the opening and commissioning of Elkins as a flight service center? Once the Elkins AFSS is fully operational, the other West Virginia flight service stations are supposed to be consolidated. I have included report language in prior appropriations' reports to protect flight service stations from closing until equal or better service is guaranteed. What is the latest consolidation schedule?

ANSWER: The Elkins AFSS will be commissioned in February 1991 using the personnel from the Elkins Flight Service Station (FSS) which is co-located on the same airport. The transition should be transparent to the pilot, except that some new and unique (to West Virginia) services will become available. The AFSS will be equipped with the Leased Service A and B System -- currently operating in each of the seven FSS's in West Virginia -- a communications switching system, and an interim graphic weather display system. The latter two systems are used in the 46 AFSS's currently operating, and are superior to any equipment installed in the seven FSS's within the State. The graphics system will provide near real-time weather radar information on a state-wide basis. Charleston is currently the only FSS in West Virginia that has a radar display and is limited to the central portion of the state. These enhanced services will not be available to pilots throughout the State until all consolidations have been accomplished.

The Model 1 Full Capacity equipment is scheduled to be delivered to Elkins in October 1991. In accordance with current legislation FSS consolidation will not be accomplished until this equipment becomes operational (January 1992). Four of the seven FSS's in the State provide weather observation service. In accordance with FAA policy this service will be maintained at each location either by contract observer or by automated means. The consolidation schedule for FSS's in West Virginia are as follows:

FSS	Consolidation Date
Bluefield	3rd Qtr FY 1992
Charleston	1st Qtr FY 1993
Huntington	3rd Qtr FY 1992
Martinsburg	4th Qtr FY 1992
Morgantown	4th Qtr FY 1992
Parkersburg	1st Qtr FY 1993

AIRWAY SCIENCE CURRICULUM

SENATOR BYRD: The Committee has been concerned about FAA's manpower needs in a number of areas, particularly controllers, inspectors, and maintenance technicians. The FAA is understaffed in all these areas.

What programs does FAA have in place that utilize American colleges, universities, and technical schools to assist in the recruitment and training of the needed personnel? GAO has reported to the Committee regarding staff shortages in these areas, and also on the difficulty that the FAA Academy has and will have to train all the necessary personnel.

ANSWER: Forty-one institutions have been recognized by the FAA for their aviation curricula. The Airway Science Curriculum Program is a demonstration project under the Civil Service Reform Act of

1978. The objective of this program is to compare the performance and potential of graduates from a model collegiate aviation curriculum with that of employees hired through our regular recruiting process.

In addition, this fiscal year the FAA is initiating a Congressionally-directed pre-hire air traffic control (ATC) program through the Mid-America Aviation Resource Consortium (MARC), a consortium of Minnesota post-secondary educational institutions. Also, the FAA recently entered into a contract with an 8A firm to work with Hampton University, an historically Black school, to develop a pre-hire ATC curriculum.

SENATOR BYRD: Don't you think that it would be a good use of schools of higher education to assist FAA to fill these hard-to-staff positions?

ANSWER: Yes. The FAA is currently involved in a number of innovative recruitment and training programs with academic institutions. Several pre-hire air traffic control projects are in progress. In addition, the FAA has hired trainee aviation safety inspectors and electronics technicians from institutions recognized under our Airway Science (AWS) Program. We are committed to hiring more this year.

Also, we are working with our AWS schools to upgrade their curriculum with additional technical course content geared more closely to the FAA's needs.

SENATOR BYRD: FAA, in the past, has administered a program called airway science curriculum, that provided funding to schools of higher learning. What is the status of that program?

ANSWER: The Airway Science Curriculum Program has established an academic standard to assure high aviation education quality at the collegiate level. The Airway Science Grant Program provides funds in direct support of the Airway Science Curriculum Programs recognized by the FAA. The grant program helps defray the high cost of airway science academic programs by providing enhanced educational opportunities to airway science students through the use of state-of-the-art instructional facilities and equipment.

Since FY 1982, Congress has appropriated $44 million in support of airway science grants. All airway science grant funds have been awarded. (See attached chart for funding levels and institutions.)

AIRWAY SCIENCE GRANT PROGRAM

Fiscal Year	Institution	Grant Status	Award $	Purpose[1]
82	U/North Dakota[2]	Awarded	$4,000,000	F/E
83	U/North Dakota[2]	Awarded	2,750,000	F/E
83	Hampton U	Awarded	2,250,000	F/E
85	U/North Dakota[2]	Awarded	1,000,000	E
85	Florida Memorial[2]	Awarded	1,000,000	F
86	Tennessee State U	Pending recognition of AWS Curriculum	800,000	F/E
85	Embry-Riddle Aero U	Awarded	500,000	F
85	National U	Awarded	500,000	F/E
85	Middle Tenn State U	Awarded	871,044	F/E
85	Purdue U	Awarded	128,956	E
85/86	Texas Southern U	Awarded	200,000	F/E
			31,168[3]	
86	U/North Dakota[2]	Awarded	3,828,000[3]	F/E
86	Delta State U[2]	Awarded	2,201,100[3]	F/E
86	Florida Memorial C[2]	Awarded	2,871,000[3]	F/E
86	Cal State U	Pending recognition of AWS curriculum	48,082	E
86	Eliz City State U	Awarded	144,050	E
86	Dowling College	Awarded	223,300[3]	F/E
86	Ohio State U	Awarded	223,300	F/E
87	U/North Dakota[2]	Awarded	3,000,000	F/E
87	Florida Memorial C[2]	Awarded	2,000,000	E
87	Auburn U	Awarded	220,255	E
87	Embry-Riddle Aero U	Awarded	204,000	E
87	Flor Inst of Tech	Awarded	1,000,000	F
87	Hampton U	Awarded	300,000	F
87	Interamerican U of PR	Awarded	947,312	F/E
87	Kearney State C	Awarded	162,315	E
87	Middle Tenn State U	Awarded	90,164	E
87	National U	Awarded	500,000	E
87	Ohio State U	Pending revised plan	900,000	F
87	San Jose State U	Awarded	362,800	E

Fiscal Year	Institution	Grant Status	Award $
87	Southern Illinois U	Awarded	312,754
88	Auburn[2]	Awarded	237,500
88	Embry-Riddle Aero U[2]	Awarded	1,425,000
88	Flor Instit of Tech[2]	Awarded	237,500
88	Florida Memorial C[2]	Pending grant plan	1,425,000
88	U/North Dakota[2]	Awarded	475,000
89	Daniel Webster C	Pending grant agreement	146,635
89	Dowling C	Pending grant agreement	129,265
89	Embry-Riddle Aero U	Pending grant agreement	200,000
89	Metro State U	Pending grant agreement	200,000
89	National U	Pending grant agreement	173,735
89	Parks College	Pending grant agreement	150,365

OTHER EDUCATIONAL GRANTS

Fiscal Year	Institution	Grant Status	Award $
87	Barry U[2]	Awarded	3,914,000
88	Polytechnic U[2]	Awarded	1,425,000
90	U/North Dakota[2]	Pending legal authority	3,000,000
90	Fairmount State C	Pending legal authority	3,000,000
		TOTAL	$49,709,000

[1] F=Facilities; E=Equipment

[2] Congressionally designated awards

[3] Includes GRH reduction

SENATOR BYRD: What types of programs (and level of funding) have been funded through the airway science curriculum program?

ANSWER: Since FY 1982, 44 individual grants have been awarded to 25 different institutions. The grant awards have ranged from $48,000 to $4 million and have funded the acquisition of a full range of academic facilities and equipment including classroom buildings and laboratories, and classroom, simulation, meteorological, audio visual, avionics, and computer equipment. All approved grant projects are in direct support of an institution's recognized airway science curriculum. (See attached chart for specific funding levels and institutions.)

AIRWAY SCIENCE GRANT PROGRAM

Fiscal Year	Institution	Grant Status	Award $	Purpose[1]
82	U/North Dakota[2]	Awarded	$4,000,000	F/E
83	U/North Dakota[2]	Awarded	2,750,000	F/E
83	Hampton U	Awarded	2,250,000	F/E
85	U/North Dakota[2]	Awarded	1,000,000	E
85	Florida Memorial[2]	Awarded	1,000,000	F
85	Tennessee State U	Pending recognition of AWS Curriculum	800,000	F/E
85	Embry-Riddle Aero U	Awarded	500,000	F
85	National U	Awarded	500,000	F/E
85	Middle Tenn State U	Awarded	871,044	F/E
85	Purdue U	Awarded	128,956	E
85/86	Texas Southern U	Awarded	200,000 31,168[3]	F/E
86	U/North Dakota[2]	Awarded	3,828,000[3]	F/E
86	Delta State U[2]	Awarded	2,201,100[3]	F/E
86	Florida Memorial C[2]	Awarded	2,871,000[3]	F/E
86	Cal State U	Pending recognition of AWS curriculum	48,082	E
86	Eliz City State U	Awarded	144,050	E
86	Dowling College	Awarded	223,300[3]	F/E
86	Ohio State U	Awarded	223,300	F/E
87	U/North Dakota[2]	Awarded	3,000,000	F/E
87	Florida Memorial C[2]	Awarded	2,000,000	E
87	Auburn U	Awarded	220,255	E
87	Embry-Riddle Aero U	Awarded	204,000	E
87	Flor Inst of Tech	Awarded	1,000,000	F
87	Hampton U	Awarded	300,000	F
87	Interamerican U of PR	Awarded	947,312	F/E
87	Kearney State C	Awarded	162,315	E
87	Middle Tenn State U	Awarded	90,164	E
87	National U	Awarded	500,000	E
87	Ohio State U	Pending revised plan	900,000	F
87	San Jose State U	Awarded	362,800	E
87	Southern Illinois U	Awarded	312,754	
88	Auburn[2]	Awarded	237,500	
88	Embry-Riddle Aero U[2]	Awarded	1,425,000	
88	Flor Instit of Tech[2]	Awarded	237,500	
88	Florida Memorial C[2]	Pending grant plan	1,425,000	
88	U/North Dakota[2]	Awarded	475,000	
89	Daniel Webster C	Pending grant agreement	146,635	
89	Dowling C	Pending grant agreement	129,265	
89	Embry-Riddle Aero U	Pending grant agreement	200,000	
89	Metro State U	Pending grant agreement	200,000	
89	National U	Pending grant agreement	173,735	
89	Parks College	Pending grant agreement	150,365	

OTHER EDUCATIONAL GRANTS

Fiscal Year	Institution	Grant Status	Award $
87	Barry U[2]	Awarded	3,914,000
88	Polytechnic U[2]	Awarded	1,425,000
90	U/North Dakota[2]	Pending legal authority	3,000,000
90	Fairmount State C	Pending legal authority	3,000,000
		TOTAL	$49,709,000

[1] F=Facilities; E=Equipment
[2] Congressionally designated awards
[3] Includes GRH reduction

SENATOR BYRD: In the fiscal year 1990 appropriations, I was able to set aside specific funding for Fairmont State College and its aviation-related educational activities.

What is the status of that effort?

ANSWER: With the passage of the Dire Supplemental Bill, HR 4404, giving the FAA the legal authority to award a grant to Fairmont State College to construct, equip, and operate the Mid-Atlantic Aviation Training and Education Center, in Clarksburg, West Virginia, FAA will immediately commence activities to award the grant. FAA staff members have been meeting with representatives of the institution to discuss the proposed project and grant administration procedures. The institution is currently completing an official application including a detailed project plan, an itemized budget, and milestones. You can be assured that FAA will award this grant in a timely manner based on the legal authority.

SENATOR BYRD: What is FAA doing to encourage schools like Fairmont to get involved in helping solve aviation-related problems like training, needed controllers, inspectors and technicians? Please provide specific examples.

ANSWER: The FAA encourages and assists schools in establishing Airway Science (AWS) aviation curriculum programs. The FAA has developed an AWS Curriculum Proposal package which it furnishes to interested schools, and provides ongoing advice to schools on the criteria for FAA's approval of the program. There are currently 41 academic institutions participating in the AWS Program.

Our special emphasis program includes periodic visits by our Civil Rights officers to minority and Historically Black Colleges and Universities to encourage and assist them in preparing and submitting their proposals for FAA recognition. Currently, nine of these institutions have FAA recognition with eight more in various stages of the process. The FAA has recently initiated an experimental pre-hire air traffic control (ATC) program with Hampton University.

The FAA recently reviewed the ATC program in place at the Community College of Beaver County in Beaver Falls, Pennsylvania. Due to the quality of the school's program and because it operates a local tower, the FAA is aggressively pursuing the hiring of the school's ATC program graduates.

SENATOR BYRD: Under what authority does FAA provide training and research grants to schools?

ANSWER: Currently, the FAA does not have the legal authority to grant funds to institutions for training and research. The Airport and Airway Improvement Act provides the agency with the authority to grant funds for airport planning and development. The only other grant program administered by the FAA is the Airway Science Grant Program which is by Congressional direction. Language providing the legal authority to enter into airway science grants is included in the annual Appropriations Bill for the Department of Transportation. If the airway science language is deleted as in FY 1990, the agency is not able to award grants to educational institutions in support of their Airway Science Curriculum Programs.

On November 17, 1989, the Aviation Research Grant Act, HR 2581, passed the House and is now before the Senate Commerce Committee. If passed, the Act will amend the Airport and Airway Improvement Act and provide FAA the authority to establish a research grant program with academic institutions and nonprofit organizations. This will enable them to sponsor activities ranging from exploratory experiments to establishing Centers of Excellence for long-term research in specific areas.

SENATOR BYRD: What activities can be and are covered under this authority?

ANSWER: The Airway Science Grant Program funds the acquisition of academic building and associated facilities and nonexpendable equipment and materials used in the actual teaching and administration of an institution's airway science curriculum.

HR 2581 would permit FAA to award grants for research in the areas of air traffic control automation, aviation training, human performance, aircraft noise abatement, aging aircraft, structural integrity, and artificial intelligence.

SENATOR BYRD: Does FAA have guidelines for criteria for evaluating programs to be conducted by universities and colleges in the research and training area? If so, what are they?

ANSWER: To qualify for an airway science grant, an institution must have an Airway Science Curriculum Program recognized by the FAA. Competitive grant applications are evaluated against established criteria which are published and available to all institutions. The criteria include:

a. Institutional impact
b. Institutional commitment
c. Project plan
d. Budget plan
e. Expected benefits
f. Qualifications of key personnel
g. Evaluation plan

If HR 2581 is enacted, the FAA will establish a solicitation, review, and evaluation process that will ensure the funding of proposals having adequate merit and relevancy to the FAA mission, an equitable geographical distribution of grant funds, and the inclusion of minority colleges and universities for funding consideration.

TRACONS

SENATOR BYRD: Is it accurate to say that FAA, in implementing the NAS Plan, which involves transitioning to area control facilities (ACFs) and tower computer complexes, is not establishing new TRACONs (terminal radar approach control facilities)?

ANSWER: It has been the FAA's policy since 1985 not to establish or replace any TRACON's except in situations where we are faced with deteriorating facilities or the inability to continue to meet system capacity demands. In response to operational needs I have approved establishment of end-state TRACON facilities for the Los Angeles, Chicago and Dallas-Fort Worth areas. Los Angeles and Chicago will involve construction of new buildings and the Dallas-Fort Worth Facility will involve a building expansion.

SENATOR BYRD: What is the status of the ACF implementation? (Include scheduled dates if appropriate.)

ANSWER: Due to the likelihood of a major programmatic change in the end-state architecture, the ACF implementation planning is currently limited to continuing evaluation of alternatives including cost/benefit analyses, assessment of operational needs and identification of human resource issues.

I have provided the subcommittee with a preliminary schedule of consolidation options. However, that plan is under heavy review and will be modified extensively.

SENATOR BYRD: GAO has reported on a number of NAS Plan projects that are behind schedule because of contractors' technical problems. Has that affected the ACF schedule? If so, how? What systems were involved?

ANSWER: Yes. The ACF schedule has been impacted by the Advanced Automation System (AAS) slippage. The ACF implementation is based upon equipment availability.

WEST VIRGINIA AIRPORTS

SENATOR BYRD: What is the status of the installation of a localizer and marker beacon at the Grant County Airport in Petersburg? (Electronic installation was originally scheduled for July 1990 with the FAA flight check in September 1990.)

ANSWER: The site preparation for the localizer and Distance Measuring Equipment (in lieu of marker beacon) has commenced. Installation of the equipment will begin July 1990 and should be completed by October 1990.

SENATOR BYRD: On the fiscal year 1989 supplemental appropriations, I was able to secure bill language that allowed the FAA to renegotiate the allowable cost sections of grant agreements already entered into that concerned site preparation work at the Logan County Airport. What is the status of that project?

ANSWER: Recognizing the problems encountered by the sponsor in accomplishing the project with the $750,000 originally approved, we have revised the funding upward by $962,766. The revised amount of $1,712,766 is sufficient to accomplish the site preparation. With this new funding, the project is now underway and is proceeding on schedule.

SENATOR BYRD: Wood County Airport has been interested in acquiring an upgraded radar system. It is my understanding that FAA is in the process of upgrading the present terminal radar network by installation of the new ASR-9 systems at the highest air traffic density location, necessitating the installation of these systems at some ASR 7-8 locations, and relation of the ASR 7-8 systems to lower density locations. Is this the process that FAA is following?

ANSWER: Yes it is.

SENATOR BYRD: Under this procedure, when can Wood County expect an upgrade?

ANSWER: Wood County does not meet Phase I ASR establishment criteria and is not scheduled to receive a new or an upgraded radar system.

SENATOR BYRD: Does FAA have a specific schedule of where the bumped equipment will be located? If so, please provide that schedule.

ANSWER: FAA has a specific schedule for ASR 7-8 equipment relocations. Those facilities receiving this equipment and planned equipment availability dates are:

Greenville, SC	3/90
Great Falls, MT	2/90
Springfield, IL	3/90
Pueblo, AZ	3/90
Sioux City, IA	3/90
Bakersfield, CA	3/90
Rochester, NY	4/90
Beaumont, TX	4/90
St. Thomas, VI	4/90
Moline, IL	5/90
Burlington, VT	5/90
Flint, MI	5/90
Griffis (Rome),NY	6/90
Columbia, SC	6/90
Gulfport, MS	7/90
Lincoln, NE	7/90
Lansing, MI	8/90
Elmira, NY	9/90
Green Bay, WI	9/90
Saginaw, MI	8/90
Allentown, PA	9/90
Erie, NY	10/90
Manchester, NH	10/90
Mobile, AL	8/90
Binghamton, NY	10/90
Rockford, IL	11/90
Otis, MA	11/90
Springfield, MO	12/90
Colorado Spngs,CO	12/90
Evansville, IN	1/91
Duluth, MN	1/91
Waco, TX	2/91
Longview, TX	2/91
Fresno, CA	3/91
Abilene, TX	3/91
Amarillo, TX	3/91
Waterloo, IA	3/91
Peoria, IL	4/91
Champaign, IL	4/91
Mansfield, OH	5/91
Eugene, OR	5/91
Monroe, LA	6/91
Lake Charles, NY	6/91
Santa Barbara, CA	6/91
Boise, ID	7/91
Bangor, ME	7/91
Augusta, ME	8/91
Lafayette, LA	8/91
Reading, PA	8/91
Terra Haute, IN	9/91
Palm Springs, CA	9/91
Tallahassee, FL	9/91
Sioux Falls, SD	10/91
Portland, OR	10/91
Stockton, CA	11/91
Ft. Smith, AR	11/91
South Bend, IN	12/91
Kalamazoo, MI	12/91
Casper, WY	12/91
Lexington, KY	1/92
Billings, MT	1/92
Clarksburg, WV	1/92
Huntington, WV	2/92
Spokane, WA	2/92
Fargo, ND	1/92
South Bend, ID	5/92
Wilmington, DE	5/92
Macon, GA	6/92
Lihue, HI	6/92
Midland, TX	7/92
Fayetteville, NC	6/92

QUESTIONS SUBMITTED BY SENATOR HARKIN

PROGRESS OF ORGANIZING COOPERATIVE RESEARCH VENTURES

SENATOR HARKIN: In general, what progress has the FAA made in terms of organizing cooperative research ventures between industry and the academic community in areas related to aging aircraft, nondestructive evaluation of materials, and aviation system reliability?

ANSWER: The FAA Technical Center has been coordinating research needs with Iowa State University to establish a Center for Aviation Systems Reliability (CASR) focused on the nondestructive inspection and evaluation aspects of the aging aircraft problem. The CASR is intended to serve as an international clearing house for accepted and emerging NDE information/technologies and for the transfer of state-of-the-art technologies to the aviation community.

ESTABLISHING UNIVERSITY BASED RESEARCH

SENATOR HARKIN: What experience has the FAA had in establishing federally financed university based research and development centers in areas of critically important technology or in areas where the FAA has an increasingly important technical role such as in nondestructive evaluation and aviation system reliability?

ANSWER: In 1986, the FAA collaborated with the Wichita State University to establish their Institute for Aviation Safety Research. Although this effort concentrated primarily on the structural crashworthiness of aircraft, it has been used as a model in establishing the same type of industry/Government/university center at Iowa State University.

SENATOR HARKIN: Why did the FAA join the Center for Nondestructive Evaluation at Iowa State University and what has been your experience with that Center since joining?

ANSWER: The FAA recognized the technological expertise embodied in the Center for Nondestructive Evaluation through briefings and visits to that organization at Iowa State University. Joining in the Center has afforded the FAA first-hand access to data and interchange with the other industry and university experts that is being used to guide our research efforts toward aging aircraft solutions.

SENATOR HARKIN: What programs do you have underway designed to link the new developments in nondestructive evaluation as an engineering discipline with industry and with community colleges that are involved in training aviation maintenance and nondestructive evaluation personnel?

ANSWER: FAA is formulating program structures that will be integrated into junior colleges through coordinated programs by Iowa State University and Northwestern University. These programs are designed to provide nondestructive technology training for industry's aircraft maintenance technicians and personnel.

NEW NONDESTRUCTIVE TESTING TECHNIQUES

SENATOR HARKIN: What mechanism has the FAA established for rapid reduction to practice of new nondestructive testing techniques from the general scientific community and furthermore what evidence can you give regarding FAA's ability to develop technical responses to complex materials reliability problems confronted by air carriers and manufacturers?

ANSWER: New nondestructive testing techniques that shorten the time element and improve the quality of result are under investigation by FAA and its contractors. The nature of these investigations is time-consuming in determining which of the spectrum of defects is best addressed by each specific technique. The FAA is relying on the expertise and talents of the Center for Nondestructive Evaluation to speed this process in the development of prototype systems for demonstrations to the industry.

Regarding FAA's ability to develop technical response, as an illustration, we and the industry were faced with the possible use of proof pressure testing, which is a form of destructive testing, as an interim inspection approach. FAA, with NASA's cooperation, determined through analysis that such an approach was not feasible, and potentially hazardous in itself; therefore the approach was rejected.

AIR TRANSPORT ASSOCIATION'S WORTHINESS TASK FORCE

SENATOR HARKIN: Are you aware of the status of the Air Transport Association's Worthiness Task Force and its review of various proposals for expanded research and other activities?

ANSWER: The FAA has been in constant contact with the Airworthiness Assurance Task Force (AATF) of the AIA/ATA Working Group. The AATF was briefed in detail on the expanded Program Plan for Aging Aircraft in early May to solicit their comments. These, along with other comments from within FAA, are being considered in preparing the final expanded plan, scheduled to be released in early July.

CENTER FOR AVIATION SYSTEM RELIABILITY

SENATOR HARKIN: What progress have you made in implementing the start-up programs associated with the establishment of the Center for Aviation System Reliability?

ANSWER: FAA and Iowa State University have made good progress in developing the technical requirements that will form the work of the Center for Aviation Systems Reliability. There has been at least four face-to-face meetings between the Center and the FAA technical personnel to develop the technical goals. The university's facilities also have been toured to develop familiarity with their capabilities.

SENATOR HARKIN: When can we expect the Center for Aviation System Reliability to be operational?

ANSWER: We are following the most expeditious and legal procurement routes to enable the Center to become fully operational. We expect that utilizing the Ames Laboratory should result in a contract by the end of the fiscal year.

SENATOR HARKIN: Why has the FAA taken more than six months to commit the $3 million appropriated to begin the Center for Aviation Reliability?

ANSWER: We have experienced some difficulty in establishing a method of funding transfer. Initially, the FAA Technical Center intended to fund the Center for Aviation Systems Reliability through the Mid-West Regional Transportation Research Institute. Unfortunately, FAA was unable to do this because the Institute was already funded at the statutory limit of $10 million. Our options, at this time are a Broad Agency Announcement or a sole-source procurement.

R&D BUDGET

SENATOR HARKIN: In FY 91, the FAA proposed an increase in the R&D budget to $190 million. What are the research programs FAA has established for research into metal fatigue and corrosion, and detecting problems with metal fatigue? What is the amount expected to be spent on each of those programs if the full request is provided?

ANSWER: At this time, the entire aging aircraft program is directed towards solving the problems associated with detecting and analyzing fatigue and corrosion in metal structures. In the FY 1991 request, we have requested $6,645,000 for the aging aircraft program. In each of the major areas of research, the following contract dollar amounts are planned:

Fatigue/Fracture	$887,000
Flight Loads	200,000
Repair/Maintenance	1,400,000
Nondestructive Inspection	1,116,000
Corrosion Control	700,000
Human Factors	700,000

AIRCRAFT INSPECTION TRAINING

SENATOR HARKIN: Are you aware of the National Science Foundation plan to link their Center for Nondestructive Evaluation of Materials at Iowa State with several community and technical colleges in an effort to enhance training of aircraft inspection personnel?

ANSWER: The FAA is fully aware of the long-range plans for establishing a network of community colleges which will offer a curriculum in nondestructive evaluation. Hopefully, the graduates from these community colleges will provide the manpower needed by the airlines to ensure the continued safety of the fleet.

SENATOR HARKIN: What programs does the FAA have to enhance and improve inspection training of personnel through colleges and universities?

ANSWER: By working with the Center for Nondestructive Evaluation at Iowa State University, the FAA plans to guide the development of this curriculum. We intend to ensure the student learns a reasonable blend of skills reflecting a practicable understanding of aircraft structures and the NDE equipment available to inspect them. We also intend to encourage the schools to introduce new technologies into the curriculum as soon as possible.

PEAK PERIOD PRICING

SENATOR HARKIN: Various concepts of "pricing" are being considered as a means of regulating traffic at congested airports. The "Massport proposal" is the most notable. It was properly found to be improper. It discriminated against general and commuter use of the airports. Access to major airports is vital to regional economies.

What is your position concerning "peak period pricing", landing fee schedules and other similar plans for reducing congestion? What actions is the FAA taking to entice airlines to shift flights from the most congested airports to under-utilized airports?

ANSWER: A principal concern of the FAA is that peak period pricing not be used to limit the number of aircraft operations at an airport. Peak period pricing is viewed as a device for efficiently using existing capacity while simultaneously providing a means to fund additional capacity to meet growing demand. For this reason it is imperative to condition the implementation of peak period pricing not only on the existence of delay and congestion, but also on a genuine commitment by an airport ultimately to meet demand through capacity expansion.

For the past several years, the FAA has been engaged in a number of efforts to optimize airport and airspace capacity. These efforts have included substantial investments in new technology, airport improvement grants, funding for new runways and reliever airports, expansion of the air traffic control workforce, development of more efficient air traffic procedures, the use of FAA capacity task forces and special FAA "Tiger Teams" to tackle traffic bottlenecks, development of airport/airspace computer models, several rounds of airline scheduling discussions, public disclosure of airlines' on time performance (to encourage more realistic scheduling), and a variety of other measures. All of this has involved discussion with the airlines and airports sponsors. However, the ultimate decision regarding locations served and the frequency of this service is the airlines.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

UNOBLIGATED BALANCES

SENATOR D'AMATO: FAA now has $2.3 billion in unobligated balances of capital funds (facilities and equipment). I understand that FAA has now informed us that it will commit $16.5 million of that sum to modernization projects and other projects in the Eastern Region (covering N.Y. and N.J.). That is fine. But, what are your plans for the remaining unobligated balance of some $2.28 billion?

ANSWER: The total unobligated balance for the FAA Facilities and Equipment appropriation as of April 30, 1990, was $2.264 billion. Of that amount, an additional $1.089 billion is expected to be obligated prior to the end of this fiscal year. The unobligated balance on September 30, 1990, is now estimated to be $1.175 billion which will consist of funds still available for obligation from the fiscal year 1990 and prior appropriations. The current obligation plan calls for full obligation of the September 30, 1990, unobligated carryover by the end of fiscal year 1992. (The fiscal year 1990 portion of that carryover can legally be obligated until the end of fiscal year 1994).

FAA'S ABILITY TO TRAIN EMPLOYEES

SENATOR D'AMATO: GAO testified that FAA may not be able to hire all of the 300 inspectors or 900 new technicians it wants this year because it is unable to train them. The FAA Academy in Oklahoma City does not have enough inspector instructors, or maintenance instructors. The quality of controller training has been criticized in the areas of using back-up systems, controlling traffic in bad weather, and knowing emergency procedures.

What is FAA doing to improve training?

ANSWER: Lack of inspector and maintenance instructors has not directly affected FAA's ability to hire aviation safety inspectors or systems maintenance technicians. Budget constraints caused a delay in hiring of aviation safety inspectors and systems maintenance technicians until the third and fourth quarters of the fiscal year. This creates a scheduling imbalance in Academy student workload and delays in training new hires. For aviation safety inspector training, the Academy is adding additional classes, increasing class size, and using associate instructors from the field.

The FAA has initiated a Flight Plan for Training which includes 47 projects to improve and modernize FAA training for all safety related occupations including air traffic controllers, aviation safety inspectors, and systems maintenance technicians. Fourteen of the 47 projects specifically address curricula improvements.

SENATOR D'AMATO: Why are 30 of 47 projects behind schedule at FAA's training office? Has FAA established priorities within its training programs?

ANSWER: Flight Plan for Training activities and schedules were based on planned resource levels of $19.6 million (includes the requested supplemental) in FY 1989 and $41.1 million in FY 1990.

FY 1989 actual obligations for Flight Plan projects totaled $5.5 million. The funding shortfall delayed or extended 14 projects in FY 1989. Nine others were delayed due to contracting or planning problems.

In FY 1990, Congress cut $20 million from the Flight Plan during the regular appropriations review process. In addition, the Gramm-Rudman-Hollings sequester, the across-the-board drug offset, and the need to absorb fully the almost $70 million cost of the January 1990 pay raise required another $7.7 million reduction in Flight Plan funding. Thus, FAA has allocated $13.4 million for Flight Plan projects from the Operations appropriation. Lack of funding delayed three projects in FY 1990; one project was delayed by planning problems.

FAA gives highest priority to Flight Plan projects with a high safety impact or greatest potential to reduce the overall cost of the agency's training program. This would insure implementation of projects such as:

- Redesign of the Air Traffic curriculum
- Pre-hire training of air traffic controller candidates
- Reduce the length of the air traffic controller selection process
- Redesign of the Aviation Security curriculum

OPERATION AND MAINTENANCE

SENATOR D'AMATO: Last year you implemented a pay demonstration program to relocate experienced controllers and maintenance technicians at hard to staff facilities such as New York City. We understand you had problems implementing the program because of a shortage in permanent change of station money to allow people to relocate to those locations.

Will you have sufficient funds to allow these transfers to occur in the future?

ANSWER: Relocating personnel to pay demo facilities is considered to be one of the highest priority items when considering agency PCS funding availability. Accordingly, there should be adequate PCS funding for pay demo facilities in the future.

NEW YORK TRACON

SENATOR D'AMATO: How successful has the Pay Demonstration project been in attracting experienced controllers to New York TRACON?

ANSWER: The project has been very successful in attracting experienced employees to the New York TRACON. Since the project was implemented, a total of 27 controllers have transferred to the TRACON from other FAA facilities. Five other entry-level controllers have been selected from the FAA Academy, and two former FPL controllers have been reinstated.

In addition, 13 controllers have been selected for positions at the New York TRACON, but have not yet reported.

SENATOR D'AMATO: Is the training program in New York TRACON adequate to handle an influx of experienced controller transfers and academy graduates?

ANSWER: The New York TRACON has a complete four-scope Enhanced Target Generator (ETG) laboratory that can handle the influx of experienced controllers and academy graduates.

New York TRACON provides their own "site-specific" radar training at the facility. One training specialist from each area of operation is used to conduct this training.

FACILITIES AND EQUIPMENT

SENATOR D'AMATO: Procurement problems have been identified as contributing to the delay in efficiently modernizing the air traffic control system. This problem has been recognized and acknowledged by the Secretary of Transportation. What specific changes have you made to improve the procurement techniques used by FAA? Are you proposing any changes that will require the support and action of this Committee?

ANSWER: Specific improvement techniques will take time to develop. We have, however, under the Executive Director for Acquisition, launched a project to do exactly that. He has a Special Assistant for Acquisition Improvement who is assembling a small team to make a detailed analysis of the present process, design a computer model, and use it as a tool for improving and streamlining the procurement process. In addition, his Office of Acquisition Policy and Oversight has reviewed studies completed for DoD by various organizations including the Defense Science Board, The President's Blue Ribbon Commission on Defense Management, GAO and others, for the purpose of applying their recommendations, where applicable, to the FAA.

The recent realignment in the FAA has been a result, in part, of a study of ways to improve the acquisition process. A major change was the consolidation of program management under one associate administrator. The level of program management has been raised, and the caliber of program managers is being improved through training programs and selection of highly experienced individuals. This stronger focus on program management, coupled with a higher level of acquisition oversight, will improve the total procurement process.

As of now we have no changes in mind that would require the support of your committee, but we will not hesitate to come to you with specific requests should we feel that to be necessary.

MAINTENANCE STAFFING

SENATOR D'AMATO: FAA and GAO have recognized a maintenance/technician staffing shortage problem. The problem will become more critical since over 50 percent of the work force is eligible to retire by 1995. What are your plans to address this critical problem, and when do you think you will have the problem resolved?

ANSWER: We believe that we can address the problem in FY 1991 with the additional positions and FTE's and the base level of contract maintenance represented in this request. In addition, we are considering a proposal for a field maintenance support contract to provide additional maintenance capacity beyond FY 1991. This effort would enable us to meet both maintenance workload and training schedules during the mid-1990's, despite heavy retirement through that period. We constantly review our workload requirements and will present our future requests with these needs in mind.

FAA STAFFING STANDARDS

SENATOR D'AMATO: GAO testified that FAA's estimates of shortages in meeting its controller and inspector work force goals, may be off target. FAA may be short many more than 1,900 full performance level controllers of 12,725 needed, because staffing standards are still being updated. It may be short many more than 250 inspectors of 3,000 needed, because FAA's staffing standards understate the number needed for major new inspection requirements. FAA may be short more than 1,500 maintenance technicians of the 10,000 needed -- and, much of this workforce is within 5 years of retirement. This shortage will worsen, especially considering that 3-5 years of training are needed to reach full performance level.

Does FAA agree with GAO that FAA staffing standards are inadequate? What is FAA doing to improve these standards?

ANSWER: FAA has been working to update and improve the accuracy of staffing standards ever since initial standards were established in the early 1970's. This is an ongoing process involving work measurement in the field, review by work groups comprised of subject matter experts, comparisons of staffing requirements generated by the standards to actual practices, audit of leave use, personal and administrative allowances, and so on. These studies produce incremental changes in the standards, typically resulting in minor changes to national estimates, but better fit at the regional and local level. Most of these studies have in fact reflected increased productivity as a result of improved work methods and increased automation resulting, for example, in a reduced estimate of controller staffing requirements for a specified level of forecast traffic activity. Even though we are always working to improve the standards, at any particular point in time, the most recently documented standards provide our best estimate of staffing requirements. We have no reason to suspect, as GAO seems to think, that the current revisions to staffing standards will result in significant increases in total staffing requirements.

CONTROLLER STAFFING

SENATOR D'AMATO: The Controller staffing goal for fiscal year 1990 was 17,495. Why did you ask for a waiver from the goal?

ANSWER: Several factors have changed our hiring requirements, thus lowering our controller work force targets:

- o Lower Aviation Activity: Actual growth in air traffic activity is slightly lower than FAA had forecast, primarily because major carriers did not increase operations as anticipated and the Eastern Airlines strike reduced aviation operations in 1989. This decrease has a cumulative effect on projections for FY 1990 and beyond.

- o Delay Initial Sector Suite System: Implementation of the Initial Sector Suite System (ISSS) is slipping because delivery of the software is delayed at least a year. This will allow FAA to defer hiring additional new controllers for transition to the ISSS, which were originally included in the FY 1990 President's Budget.

- o More Emphasis on Moving Controllers to Where Needed: FAA has added almost 10,300 to its work force since the 1981 PATCO strike, but staffing efficiently involves moving qualified controllers to the higher level facilities where they are needed. Budget constraints and cost absorptions during the past several years have severely limited the amount of funding for these necessary moves. Therefore, some of the funds that were originally budgeted to bring on additional controllers will now be used to help cover shortfalls in permanent-change-of-station moves that were impacted by the absorption of other costs.

SENATOR D'AMATO: Since you will not achieve your staffing goals for 1990, what adjustments have you made to the controller training pipeline?

ANSWER: Due to the reduction of the controller work force (CWF) goal for FY 1990, the FAA has reduced the requirement from 3,564 initial hires to 2,120.

SENATOR D'AMATO: You have reduced the number of trainees at the FAA academy from 2900 in FY 1989 to about 2100 in FY 1990. According to your own findings from the System Safety and Efficiency Reviews, controller staffing is still a major problem at many of your major facilities.

What are your intentions for FY 1991 regarding the controller training pipeline?

ANSWER: The controller workforce is currently scheduled to increase by 495 controllers in FY 1991 over the FY 1990 level. This, along with normal attrition, will require input of approximately 3,500 into the training pipeline for FY 1991. This represents an increase of 1,400 trainees at the FAA Academy in FY 1991.

OPERATION AND MAINTENANCE

SENATOR D'AMATO: Recognizing that airspace capacity in the air traffic control system and demand for air traffic control service in that airspace has an impact on controller staffing needs, how do you determine the capacity at a given control sector or in specific airspace or at a specific airport and relate that capacity to controller staffing requirements?

ANSWER: Capacity for all air traffic control sectors is determined by taking into account traffic density and complexity and analysis of the present and projected operationally acceptable levels of traffic. Every en route sector has an established number which represents the operationally acceptable level of traffic. This number is the average maximum safe level of traffic for the sector at various complexities and controller abilities. If with regularity this level is exceeded, or projected to be exceeded, preventative action will be taken. That action may be to propose establishing an additional sector. Before authorizing a new sector, we evaluate the existing and proposed sectors' density and complexity as outlined in FAA Order 7210.46, Establishment and Validation of En Route Sectors. If both the existing and proposed sectors meet our established criteria, the new sector is authorized. A similar process for authorizing new sectors is used in our terminal facilities, and is outlined in FAA Order 6480.17, Terminal Facility Modernization/Relocation Survey and Evaluation Handbook.

Airport capacity is determined through a process we refer to as an engineered performance standard or EPS. The EPS reflects the maximum amount of traffic that the airport can accept, under optimum conditions, during a specified period of time and for each of its potential runway configurations.

The process just described explains how capacity is determined and the mechanism used in establishing new sectors. However, neither of these is used in calculating our staffing requirements. Staffing requirements are established and validated through continued monitoring of actual traffic activity and by forecasting future traffic growth. Our staffing requirements are established to meet the demands of the forecasted traffic.

SENATOR D'AMATO: Based upon the method you use to relate airspace capacity and demand to controller staffing needs, what are your controller staffing needs at the present time?

ANSWER: Our current staffing goal for controllers in FY 1990 is 17,000.

SENATOR D'AMATO: Do you have sufficient resources within your organization to routinely monitor demand for the airspace and your ability to satisfy that demand?

If not, what particular funds have you requested to obtain the necessary resources?

ANSWER: Currently, there are sufficient resources in our funding base to ensure a safe airspace for the flying public. To monitor the airspace demand and provide the necessary resources to satisfy that demand requires contributions from nearly all of Air Traffic's program areas.

All resources requested in our budgetary process, either directly or indirectly, contribute to improving the safety of our airspace.

MAINTENANCE STAFFING

SENATOR D'AMATO: The current maintenance staffing problem will not be solved by simply adding staff. Improved training methods are needed and the use of contractor support is needed to fill the gap. What specific part of your budget request addresses this problem? What total amount of contract funding do you anticipated is needed to assure the National Air Transportation System is not adversely affected?

ANSWER: A contract maintenance level of $19,330,000 is currently in our base for FY 1991. We believe this amount, along with the additional positions and FTE's requested, will provide us with the reliability and safety we have always maintained. Resources to address the training requirements contained in the Human Resource Management submission, we believe are adequate to meet our training needs.

FACILITIES AND EQUIPMENT

SENATOR D'AMATO: We understand a delay in completing the en route automation systems created the necessity for FAA to take an interim step to improve our terminal hubs. This year we are faced with a further delay to finishing the en route computer systems which will impact the ability of FAA to add computer enhancements to both the en route and terminal air traffic control systems. What specific steps have you taken to complete the enroute automation program and replace the old terminal air traffic control computer systems?

ANSWER: Despite the schedule slip, the FAA continues to look to the AAS program for the final solution to both the en route and terminal air traffic control automation requirements and has taken steps to improve the schedule performance of the AAS prime contractor, IBM Corporation. However, to "bridge the gap," we have budgeted for sustaining and upgrades to both the terminal and en route systems. The Interim Support Plan will enhance the terminal facilities, while the en route system is being incrementally enhanced with projects such as Conflict Resolution Advisory and the Peripheral Adapter Module Replacement item.

SENATOR D'AMATO: Delays in the advanced automation program are prolonging the installation of the new controller displays by an additional two years. These delays are partially caused by FAA management and contractor performance and are aggravated by federal procurement constraints and a GAO recommendation to perform additional operational testing before delivering the equipment to the field. What steps have you taken to mitigate these problems and expedite the next phase of the computer modernization program at the en route and terminal facilities?

ANSWER: As a result of a joint FAA/IBM Task Force and FAA Management Audit Team, IBM and the FAA have instituted significant improvements to the program management. In addition, more realistic schedule projections are being utilized and evaluated against cost projections. The contract is being modified to provide for improved implementation strategy. This includes increased operational testing earlier in the development cycle and improved site transition, training, and testing capabilities.

SENATOR D'AMATO: What is the earliest date you expect to begin implementing the new display technology at the terminals and the centers?

ANSWER: The new display technology in the common consoles would be first installed in Seattle to support en route operations in February 1994.

AIRPORT IMPROVEMENT PROGRAM (AIP)

SENATOR D'AMATO: In FY 1991, does your AIP request contain enough dollars to accommodate outstanding letters of intent for new airport development without harming other, more immediate discretionary capacity enhancements at existing airports?

ANSWER: The number and dollar amount of requests for projects, including projects for needed capacity enhancements, exceed the amount of funds requested for the 1991 AIP. However, we plan to consider all high priority needs and will approve funding for all those projects to the extent available. Some locations may not receive the entire amounts requested, but all reasonable options will be considered in order not to harm the capacity of the national system of airports.

SENATOR D'AMATO: What is the status of the place-named instrument landing system (ILS) appropriations bill? Have you requested adequate funding to accommodate the purchase, installation, testing and operation of this equipment and any similar equipment being requested for this year?

ANSWER: We are gathering programming data on these airports so that we may determine whether standards are met and develop aggregate program costs. When costs and priorities are established on a national basis, those airports which meet standards will be programmed in priority order up to the $12 million set-aside.

SENATOR D'AMATO: Last year, we included language in the Appropriations Bill that required FAA to assume operation and maintenance for AIP-funding instrument landing system (ILS) equipment. Have you in fact done this? Are there additional ILS's purchased under AIP, that are not being maintained and operated by FAA? If so, why?

ANSWER: Yes, there are ILS's, purchased under AIP, that are not being maintained by FAA. The law has been in effect since November 21, 1989. Several questions have been raised by the law and many of these are being reviewed by the Chief Counsel's office at this time.

There are approximately 23 systems that qualify for assumption by FAA at this time. Some of these systems are in the process of being assumed and it is anticipated that the rest will be completed in the near future.

It should be noted that many airports with localizers, or airport lighting systems, or markers, etc., have requested that FAA assume maintenance of these pieces of equipment. Legal counsel has provided an opinion that the law calls for ILS's and not parts of ILS's.

This means that only systems that contain a localizer, a glide slope, and a marker constitute an ILS and only this combination (purchased with the assistance of AIP funds) will be accepted by the FAA.

NEW YORK TRACON

SENATOR D'AMATO: Air traffic delays at LaGuardia and JFK Airports have doubled in the first 5 months of FY 1990. Can you tell us what the FAA is doing to respond to this situation?

ANSWER: During the period of March 26-29, the Eastern Region air traffic division conducted a special traffic management evaluation of the New York Terminal Radar Approach Control (TRACON).

On April 12, the New York Terminal Radar Approach Control (TRACON) Procedural Review Committee was established, funded by overtime, to release personnel to work on procedures. On May 14, the committee reported their findings which included 11 proposed route changes to reduce the impact of overflight traffic over the LaGuardia Airport.

LAGUARDIA

A program of exchange visits with traffic management specialists from the LaGuardia tower and the New York TRACON has been established. These visits, one week for each specialist, are designed to improve communications and provide understanding of others areas of responsibility.

On April 20, the Eastern Region air traffic division conducted a one day evaluation at LaGuardia tower. On May 29-31, a follow up evaluation of the traffic management unit will be conducted.

The New York Port Authority has approved a project to construct a high speed taxiway from runway 22 to the PAN AM and general aviation areas located on the north side of the airport. This project, when completed, will reduce runway occupancy time and eliminate the current need for aircraft landing runway 22 to utilize the entire runway length or exit the runway to the left and then recross the runway to their parking area, which currently increases controller workload and complexity. The Port Authority has not provided a schedule for this project.

The Port Authority has also approved a project to widen taxiway "M" which will increase capacity by providing additional access for runway 31 departures. The Port Authority has not provided a schedule for this project.

On June 12-15, the Eastern Region will participate in a traffic management meeting in Atlanta along with traffic management personnel from the New York, Washington, Jacksonville, and Miami ARTCC's to discuss revising the north-south traffic flows along the east coast. The goal of this meeting is to reduce miles-in-trail restrictions currently being imposed on south bound traffic from the New York area due to compression occurring in airspace as aircraft traverse southerly along the east coast.

JFK

On May 8, an arrival fix balancing program was implemented to reduce overload at one arrival fix.

JFK departures fixes to Europe have been increased from one to three fixes.

The Eastern Region is working with Boston ARTCC to explore the possibility of issuing oceanic clearances while aircraft are on the ground at JFK airport. This clearance, currently issued by the Boston ARTCC controller while the aircraft is airborne, is lengthy and causes the Boston controller to impose restrictions on departures to allow sufficient time to issue the clearance.

The Eastern Region has proposed to the New York Port Authority, a runway 22 fan departure procedure which would increase departures by five operations per hour.

The Microwave Landing System (MLS) is scheduled to be operational by late summer or early fall. This will increase capacity when operating on runway 13 (normally a bad weather operation) by providing lower approach minimums for runway 13 R which in turn provides an additional runway for landing aircraft when operating in this configuration. Additional arrival capacity should also be realized by removing the small aircraft from the jet flow.

The Eastern Region is re-establishing the parallel monitor program for JFK. This simultaneous parallel monitor will be initially established for runway 31 L/R, and possibly runway 22 L/R. Additionally, we plan to develop the parallel monitor for use with the ILS runway 13L and the MLS runway 13R (when established). We anticipate this program will be operational by September.

SENATOR D'AMATO: To what extend has the lack of (PCS) Permanent Change of Station funds hampered your efforts in New York?

ANSWER: Lack of PCS funding has not yet hampered our "operational" capability in New York. In determining the distribution of limited PCS funding, New York Center and New York TRACON (our pay demo facilities in NY), have received adequate PCS funds. However, other facilities are beginning to feel the effect of the constrained PCS program. In some cases, key positions have been vacant for extended periods of time and career progression has been slowed. In addition, the inability to relocate qualified personnel to our busiest facilities will result in increased overtime usage.

QUESTIONS SUBMITTED BY SENATOR DOMENICI

AGING AIRCRAFT

SENATOR DOMENICI: Mr. Busey, I am pleased to welcome you before the Subcommittee. I very much look forward to working with you and the distinguished Chairman and Ranking Member of this Subcommittee on some of the critical issues facing the nation's air transportation system.

I have had the pleasure of a dialogue with the distinguished Secretary of Transportation on several aviation issues. One that I believe deserves the immediate attention of the Subcommittee is the safety of aging aircraft.

Over the past two years, we have begun to see the serious implications of an aging fleet of aircraft. U.S. airlines are now operating the oldest fleets in aviation history with the average age of the fleet, approximately 3,300 planes, being 13 years. About one-third of these planes are actually 20 years or older. They have, in fact, reached their designed economic life.

If the Congress, the Federal Aviation Administration, and the airlines take action, these safety problems are largely preventable through the utilization of this nation's scientific and technological expertise. It is precisely this matching of technology to industry's needs that the federal government needs to encourage to keep the United States' competitive edge.

I have shared a proposal with the Secretary that would establish Nondestructive Evaluation Centers (NDEs), which would develop and demonstrate how state-of-the-art technology can improve the inspection, maintenance, and safe operation of commercial aircraft. This proposal has been developed by a consortium of the Sandia National Laboratory, New Mexico State University, and the Science Applications International Corporation. This consortium has a depth of experience in the technologies that have been successfully, and cost-effectively, used by the military to assess the structural integrity of aircraft and their mechanical systems. I hope you will take a serious look at this proposal, and I look forward to working with the distinguished Chairman and Ranking Member on this critical safety issue.

Mr. Busey, the FAA has requested $190 million for research, engineering and development activities to address areas, such as aging aircraft. Could you briefly describe the FAA's existing research program on aging aircraft? How much is the FAA spending in FY 1990 on this effort?

ANSWER: The research areas involved are fatigue/fracture, nondestructive inspection, human factors, repair/maintenance, corrosion control, and flight loads. The current research involves a mix of universities, Government, and industry contractors, totaling $5,535,000.

SENATOR DOMENICI: How much does the Administration propose to spend on this research in the FY 1991 budget request? Would you please provide the Subcommittee with the details of the budget request for these activities?

ANSWER: The current FY 1991 budget for aging aircraft is $6,645,000. These funds will be used to continue our research in the areas of fatigue/fracture, nondestructive inspection, human factors, repair/maintenance, corrosion control, and flight loads.

a. Fatigue/Fracture - The emphasis here is to be able to understand, predict, detect, and control the phenomena of multi-site cracking, which was the basic failure mechanism of the Aloha accident in April 1988. We also are striving for better definition of the properties of the materials to provide more confidence in damage tolerance calculations.

b. Nondestructive Inspection/Evaluation - Improvement in the quality and rapidity of inspections utilizing newer technologies with an ultimate goal of removing most of the human element through incorporation of robotics and automation of data analysis.

c. Repair/Maintenance - Reevaluation of the effectiveness of current maintenance and repair practices with improved training materials and techniques.

d. Corrosion Control - Improvement in the materials and techniques of corrosion prevention and detection and an understanding of the influence of corrosion on fatigue.

e. Human Factors - Improvement of the human performance through training, communication, work environment, and the application of automation.

f. Flight Loads - Determine the impact of flight gust and turbulence on structural load to provide improved criteria for future aircraft design.

SENATOR DOMENICI: As I recall, the FY 1990 bill included approximately $4.5 million for university research activities relating to aviation safety. I believe $3 million was committed to Iowa State University for research into aircraft crashworthiness, and $2 million is going to Wichita State University for similar research, including aging aircraft. While academic research can lay the foundation for new techniques to inspect aging aircraft, what practical application will these research efforts yield?

ANSWER: The research programs which are underway are looking into advanced solutions for aviation safety problems. We expect solutions such as: large area inspection capabilities to reduce inspection time and error; artificial intelligence capabilities to reduce inspection time and error; artificial intelligence, which will increase the probability of detection; and robotics, which will eliminate the repetitive nature of inspecting aircraft. All of these developments offer the promise of improved safety and reduced overall costs.

SENATOR DOMENICI: What portion of this research is targeted to the actual development of technologies to improve inspection techniques for aircraft and their systems, and to apply them to actual inspections?

ANSWER: All of the research is geared toward development of the technology necessary to improve inspection techniques. The intent is to provide to industry, for their use, prototype demonstrations of the developed equipment with both requisite procedures and controls.

SENATOR DOMENICI: I believe that is the innovation in the Nondestructive Evaluation Centers proposal I have just described. Its purpose would be to develop effective and verifiable technology for use by the airlines in their ongoing safety inspections of aircraft, to demonstrate its optimum use, to develop FAA-approved operating procedures for such systems, and to provide training and certification of industry maintenance personnel who would use the equipment to replace existing manual inspection techniques. This is a hands-on approach to a problem that has serious safety implications for our air transportation system.

Would you describe the FAA's general strategy on the aging aircraft issue? How long will it take the FAA to get out of the study mode and into the practical application of advanced technology to assess the structural integrity of aging aircraft?

ANSWER: As a result of information gathered at our two international conferences on aging aircraft, as well as extensive discussions with industry and academia, we have determined the Aging Aircraft R&D needs can be addressed in six areas; specifically:

a. Fatigue/Fracture - The emphasis here is to be able to understand, predict, detect, and control the phenomena of multi-site cracking, which was the basic failure mechanism of the Aloha accident in April 1988. We also are striving for better definition of the properties of the materials to provide more confidence in damage tolerance calculations.

b. Nondestructive Inspection/Evaluation - Improvement in the quality and rapidity of inspections utilizing newer technologies with an ultimate goal of removing most of the human element through incorporation of robotics and automation of data analysis.

c. Repair/Maintenance - Reevaluation of the effectiveness of current maintenance and repair practices with improved training materials and techniques.

d. Corrosion Control - Improvement in the materials and techniques of corrosion prevention and detection and an understanding of the influence of corrosion on fatigue.

e. Human Factors - Improvement of the human performance through training, communication, work environment, and the application of automation.

f. Flight Loads - Determine the impact of flight gust and turbulence on structural load to provide improved criteria for future aircraft design.

The FAA has initiated revised training programs addressing corrosion control and prevention in FY 1990. Revised NDE Advisory Circulars for industry use have been prepared and are to be released in FY 1990. Analysis of the use of proof pressure testing as an inspection technique was determined not to be feasible through combined FAA and NASA analyses in FY 1990.

It is anticipated that the R&D necessary to bring some of the advanced nondestructive techniques to practical use will be an intermediate to long-term task, of 3 to 6 years. Methods to detect and understand the multi-site cracking phenomena will require effort into the long-term, about 5 or more years.

SENATOR DOMENICI: Is the FAA enlisting the assistance of other federal research entities, including the national labs, and also the private sector in these initiatives?

ANSWER: Yes. The FAA has obtained and is pursuing a number of contractual agreements with Government, industry, and academic institutions to ensure that NDI and related research is accomplished in a timely manner. Federal organizations such as NASA, the DOT Transportation Systems Center, the U.S. Navy (NADC), and universities to include Iowa State, Northwestern, and Wichita State are included under this effort. The Center for Aviation Systems Reliability at Iowa State University will eventually become the focal point of university based research. An industry advisory board at the Center for Nondestructive Evaluation will be used to direct the focus of this research and provide for the appropriate transfer of technology.

SENATOR DOMENICI: Mr. Busey, the reports I am getting back from the consortia proposing this comprehensive nondestructive evaluation centers initiative is generally positive. Representatives of the consortia have participated in recent international conferences addressing this issue, they are talking to the airlines and airline manufacturers, as well as other federal agencies, about the need for such a program, and I commend them for pressing this issue forward.

I admit I am somewhat concerned, however, that the FAA and the Administration are not being as aggressive as they might be on this safety problem. The Secretary has, in fact, conveyed to me in an April 6th letter that while the FAA agrees the concept of Nondestructive Evaluation Centers has some merit, before we need a facility, we need further work on the technologies it might employ. My question is how do we develop these technologies unless we put them to practical application in such a setting? Many of these technologies have been successfully, and I might add, cost-effectively used by the military for aircraft inspection. How would the FAA expect to develop these technologies if it can't test their application on actual aircraft?

ANSWER: Many of the nondestructive inspection technologies that have been, and continue to be, proposed to the FAA are still in just the conceptual stage. Our approach to establishing their merit is to use them to provide results when examining a set of standardized, well-characterized samples containing known defects. Those that provide good, or acceptable, probabilities of detection, with low false alarm rates, are then used in a large-scale test on actual aircraft.

Technologies that have been used by the military, which are applicable to commercial inspection areas and equipments, have been made known to the civil segment for their use. In some cases, such as the Air Force use of neutron radiography, the potential hazard to crews of inspection personnel must first be addressed.

SENATOR DOMENICI: I encourage you, Mr. Busey, and the FAA to give this problem your serious attention. I believe the Nondestructive Evaluation Centers concept has significant merit, and would be the fastest way to development the new, technology-intensive techniques the aviation industry requires to address the aging aircraft safety issue.

AVIATION SECURITY

SENATOR DOMENICI: Mr. Busey, as you highlight in your testimony, the FAA must devote significant attention to the issue of security. The distinguished Chairman and Ranking Member placed a top priority on improved security for commercial aircraft and American travellers in last year's bill. I supported, and was extremely pleased to see, increased funding for research and demonstration of new technologies to improve security for air travellers. I believe this is one area where basic research and development efforts supported by the federal government should be available to industry to meet their security needs.

I know of one specific example, where a transfer of technology developed by Sandia National Laboratory is being installed at the Baltimore/Washington International Airport (BWI), in partnership with the FAA, to test detection devices to screen passengers and their baggage. This joint demonstration with the FAA will continue through 1992 at a cost of approximately $6 million. As I understand the program, half of these funds will come from the FAA.

Mr. Busey, could you describe for the Subcommittee what research initiatives the FAA is carrying out with the increased funding provided by the Congress for aviation security for FY 1990?

ANSWER: The additional funds were allocated to: (1) an expanded effort on the enhanced airport security demonstration at Baltimore-Washington International Airport, (2) development of alternate vapor detection prototypes in parallel with the chemiluminescence effort, and (3) an expanded effort to identify promising new technologies through feasibility studies under the Broad Agency Announcement Solicitation.

SENATOR DOMENICI: Could you provide the Subcommittee with a list of the demonstrations that are getting underway as part of the Administration's aviation security strategy?

ANSWER: The principal effort is the enhanced security demonstration at Baltimore-Washington International Airport. This demonstration will include upgrades in security devices, communications, access control, barriers, and procedures at two terminals of the airport. It will also involve demonstrations of the latest explosive detection devices.

Another major demonstration is the deployment and evaluation of the six TNA/dual sensor systems for screening checked baggage. These units will be evaluated in both public areas near the ticket counters and baggage make-up areas. In FY 1991, the FAA plans to purchase and deploy a limited number of vapor detectors for screening passengers as an operational evaluation and demonstration.

SENATOR DOMENICI: Within the FY 1991 budget request of $190 million for FAA research, engineering and development activities, how much is proposed to be spent on improved aviation security initiatives? How does that compare to amounts estimated to be spent in FY 1990?

ANSWER: The FAA is requesting $26,362,000 for research, engineering, and development activities on aviation security in FY 1991. In FY 1990, the FAA plans to expend $13,370,000 on the aviation security program.

SENATOR DOMENICI: Does the Department propose specific funding to continue aviation security demonstration projects in FY 1991? If so, how much?

ANSWER: Yes, funds are specifically requested for the continuation of the enhanced security demonstration at Baltimore-Washington International (BWI) Airport and for the purchase, deployment, and evaluation of a limited number of vapor detection systems for screening passengers at selected airports. The amounts are $900,000 for the BWI demonstration and approximately $7,000,000 for the vapor detector demonstration. Funds for the evaluation and demonstration of the six TNA systems have been allocated in previous years.

SENATOR DOMENICI: You may be aware of my efforts to improve the transfer of technology from federal research facilities to industry. Could you describe the process DOT and the FAA have gone through to secure technology, such as that developed by Sandia National Laboratory, for such demonstrations? For example, did Sandia come to the FAA, or did the FAA seek out Sandia?

ANSWER: The FAA has worked with Sandia National Laboratories since 1984, and with Los Alamos and Naval Research Laboratory since 1983. The FAA has sought out and relied on the expertise and experience of the various national laboratories since the early 80's. The FAA is a full participant in the coordinated activities of Federal agencies in anti- and counter-terrorism and in associated technical exchange committees, and has a number of jointly funded efforts with other Federal agencies.

Regarding Sandia, FAA personnel were aware of Sandia's role as lead Department of Energy lab in physical security and, through informal discussions, reached agreement on the transfer of the lab's expertise to the civil aviation arena.

SENATOR DOMENICI: What problems, if any, have DOT and the FAA experienced in gaining access to this, and other technologies?

ANSWER: The FAA and DOT have not experienced any difficulty in gaining access to technologies. In fact, as the FAA's problems and needs have become widely known, it has been approached by a number of other agencies offering to transfer technology that might be useful. The number of interagency agreements and joint projects is indicative of good cooperation among agencies.

SENATOR DOMENICI: Is the FAA surveying technologies developed by the private sector for demonstration projects? There is a great deal of innovation in this area in the private sector? If the FAA is not looking to the private sector, why not?

ANSWER: The FAA continues to solicit the private sector for new concepts or devices relevant to civil aviation. In FY 1990, the FAA used a broad agency announcement covering virtually all aspects of aviation security to solicit help from industry and academia. It has awarded a number of Small Business Innovative Research contracts over the past 3 years. FAA personnel attend meetings and conferences where equipment and devices are displayed. The Baltimore-Washington International Airport demonstration will include the "best" technologies that FAA and Sandia have identified based upon numerous meetings with and surveys of industry sources.

SENATOR DOMENICI: Finally, what is the status of FAA action regarding the installation of thermal neutron analysis devices, or TNAs, at the nation's airports? When the FAA promulgates a policy on the types of inspection technology needed at our airports, will they have a comprehensive system in place to attempt to avoid inordinate delays of the travelling public?

ANSWER: The first two TNA systems are operating in New York and Miami at baggage make-up areas. Two other TNA systems are currently being deployed in public areas of Dulles Airport in Washington D.C. and Gatwick Airport in London, England. A system installation at Frankfurt Airport is being negotiated with German government authorities. Site of the sixth unit is yet to be determined.

Technologies developed under the R&D program have an operational requirement to be automated and be able to process passengers and/or baggage with a throughput rate of six seconds per inspection. This requirement represents an attempt to assure such systems can be readily integrated into current airport operations.

ROSWELL RADAR

SENATOR DOMENICI: In last year's Appropriations Conference Report, the FAA was directed to submit a report to this committee assessing the most cost effective way and the feasibility of establishing airport surveillance radar at Roswell, New Mexico. While we have yet to receive your report, I have learned from your staff that the report will conclude that Roswell qualifies for radar based upon traffic activity, but installation of radar cannot be justified based upon benefit to cost criteria. The aviation experts in New Mexico have expressed grave concerns for air safety in the southeast corner of the state caused by the current hole in radar surveillance. Military operations are rapidly increasing in this area and greatly complicating the non-radar air traffic operations. How does FAA measure the benefit of safety against the cost of radar? What additional benefits are required to achieve a favorable benefit to cost ratio?

ANSWER: The FAA has evaluated the merits of establishing an airport surveillance radar (ASR) at the Roswell, New Mexico Airport. The results of the underlying analysis suggest that establishing an ASR at Roswell is warranted due to the unusual mix of operations at this location.

The primary safety benefits of ASR measured by the FAA are the reduced risks of midair and terrain collisions in the terminal area through the application of radar separation services. Life-cycle costs are based on investment in and operation and maintenance costs of the radar facility. Additional benefits recognized by the criteria are reduced delays for aircraft operating under instrument flight rule (IFR) conditions. These delay reductions result from the reduced separation standards made possible by radar relative to those required by manual control procedures.

Economic based criteria that considers site specific operational and economic conditions were used to estimate the life cycle benefits and costs that would be associated with an ASR at Roswell.

The FAA's Southwest Regional Office has submitted to Washington FAA headquarters the Roswell ASR as a candidate for the 1992 budget submission. However, it must compete for funding with other national airspace system projects.

AIR TRAFFIC MANAGER RECRUITMENT

SENATOR DOMENICI: Admiral, I understand that the FAA faces increasing difficulty in the air traffic control area in motivating controllers and first-level supervisors to move up the career ladder into management and staff specialist positions. I'm concerned about this problem because the FAA--like any well-run organization--needs to attract the best and the brightest into its management ranks, especially in as critical an area as air traffic control.

How serious is this problem and what incentives is the FAA considering to make air traffic control management a more attractive career option?

ANSWER: While recruitment of candidates for managerial and staff positions is not a critical problem at the present time, we have noticed a decrease in the number of candidates expressing interest in these types of positions. A recent internal study on this issue tells us that 45 percent of our managers and supervisors will be eligible to retire by 1999 and will do so. A general cultural change, which stresses family and quality of life issues, is being observed in the 1990's, and is expected to reduce the applicant pool for managerial and staff specialist positions.

The FAA is considering the following incentives to alleviate this situation:

1. To attract candidates to staff specialist positions we are requiring one year of this experience as a prerequisite for higher level managerial positions.

2. We are allowing supervisors who choose to move to staff specialist positions to return to supervisory positions, if they so choose, without requiring competition.

3. We are working on new pay systems that would eliminate the pay compression problem between upper level management and non-supervisory positions, thus providing a financial incentive for employees to seek managerial positions.

4. Our senior managers are taking time during their visits to field facilities to meet with groups of employees to discuss managerial and staff positions, and encourage applications from employees.

5. We are supporting bills in both the House and Senate that would extend early retirement service credit to time served in air traffic management and staff positions. We believe the passage of these bills would greatly enhance our ability to recruit candidates into management and staff positions.

SENATOR DOMENICI: It's been suggested by some that one way to relieve these recruitment difficulties is to extend early retirement service credit to time served in air traffic management and staff specialist positions. Currently, time served in an air traffic staff specialist or management position represents "bad time". In other words, it's not eligible for meeting the 20-year service requirement that allows an air traffic controller to retire at age 50, or the 25-year service requirement to retire at any age.

Interestingly, managers in the Federal law enforcement and firefighting fields already earn service credit for time served in those positions. The FBI, Secret Service, Forest Service and other agencies do not appear to be facing much problem in motivating supervisors and others to move up the management chain.

In your opinion, would changing the law to provide service credit to air traffic managers and staff specialists represent a useful approach that would enable the FAA to recruit greater numbers of highly qualified applicants into air traffic control management?

ANSWER: Yes. Changing the law to provide service credit to air traffic managers and staff specialists would represent a useful approach to recruiting highly qualified managers and staff specialists in air traffic. However, we believe that the FAA should have discretion to require that individuals have a reasonable amount of full performance level or first-line supervisory air traffic experience (as defined in Title 5, U.S. Code, Section 2109) before being granted that benefit.

QUESTION SUBMITTED BY SENATOR GRASSLEY

SENATOR GRASSLEY: Increased travel brought about by deregulation has caused congestion at major hub airports. In an attempt to solve the many problems presented by congested airports, the administration has proposed to raise additional airport improvement funds through increased aviation taxes and passenger facility charges. My question... has the FAA considered ways to disperse traffic to under utilized airports or should that decision be left to the airlines?

ANSWER: As a result of the 1978 deregulation of the airline industry, determination of locations to be served and the frequency of this service is a basic responsibility of the airlines. Airlines respond to the direction of the market place and fly where people want to go. Two exceptions to this are: (1) service to the four slot controlled airports (Chicago O'Hare, New York LaGuardia, JFK, and Washington National airports); and (2) service provided to small communities through the essential air service program.

The airlines have established large functional hubs because of the improved efficiency they permit in terms of both lower costs and increased frequency of service. Because of the large benefits of hubbing, it has been FAA policy to support their development by providing increased air traffic control capacity, technical assistance, and increased airport grant funding. Our proposal permitting passenger facility charges is designed to provide airports with the ability to meet increased capacity demands from hubbing and other causes.

SUBCOMMITTEE RECESS

Senator **Lautenberg**. This subcommittee will recess and our next hearing is on May 10, another vital and very favorite focus of this Congress, the Coast Guard. They will be heard on May 10, and Admiral Yost, who you must know, will make his very eloquent appeal and we will have to wrestle with that, too. So thank you very much.

Mr. **Busey**. Thank you, Mr. Chairman.

[Whereupon, at 10:56 a.m., Thursday, May 3, the subcommittee was recessed, to reconvene at 10 a.m., Thursday, May 10.]

DEPARTMENT OF TRANSPORTATION AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1991

THURSDAY, MAY 10, 1990

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:05 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Frank R. Lautenberg (chairman) presiding.

Present: Senators Lautenberg, D'Amato, Kasten, and Grassley.

DEPARTMENT OF TRANSPORTATION

U.S. COAST GUARD

STATEMENT OF ADM. PAUL A. YOST, JR., COMMANDANT

ACCOMPANIED BY:
- CAPT. KENNETH W. THOMPSON, CHIEF, PROGRAMS DIVISION
- CAPT. J. DAVID SPADE, CHIEF, BUDGET DIVISION

OPENING REMARKS

Senator LAUTENBERG. We will call this subcommittee to order and first say that this is an auspicious occasion, because we are having the appearance of Commandant Yost, who served not only the Coast Guard but his country with distinction for a lot of years, someone that I have had the pleasure of working with. I cannot say every day was a pleasure, but most days were a pleasure.

Never did I find that Admiral Yost was not 100 percent behind his people, behind his service, and behind his country. He was never deterred from doing his duty in the most professional manner, even when it came to supporting his agency to the fullest extent possible.

It was not Admiral Yost who created the budget difficulties that I had to work with. I hope, Admiral, that your successor, whom we welcome, Adm. Bill Kime—we had a chance to talk yesterday—will follow in your footsteps.

At times I would have to admit that I would lose my patience with Admiral Yost over the fact that I had all of these other budgetary problems, but once the debate was over I always had to sit back with a degree of respect and admiration and acknowledge that, there goes a man whose mission is very clear. I salute and respect you for it.

So I will miss the opportunity to have our exchanges and discussions and to celebrate some victories here and there, whether it is in the battle against pollution or the battle against the drug transporters and whether it was my efforts to help you make the decision to maintain that very important search and rescue operation at Shark River. I know that you were under terrific budget pressures during that period, but nevertheless you saw how important the Shark River Station was to the navigation and marine safety aspects of our recreation and commercial fisheries.

So I am sure, Admiral Yost, that we will be seeing one another. I have a term, I have a contract, that goes until 1995 although it's been heard around these rumor-filled halls that there might be a Senator from New Jersey who would be considered presidential timber. Thus far I have not heard the woodsman's axe, so I assume that we are talking about another Senator from New Jersey.

So I will continue to do my service and look forward to the time that we can say hello, and I will update you on what is happening with the Coast Guard and you can tell me what is going on out there in the other parts of life.

Perhaps more than any other agency within our Department of Transportation, the Congress and the American people have taken the Coast Guard, first, to their hearts, but second, for granted. For the last 200 years, whether it is in the area of search and rescue, law enforcement, aids to navigation, or protecting our marine environment, we have expected the Coast Guard to be, as the motto says and as the Commandant exemplified, Semper Paratus—Always Ready.

In today's world, however, readiness is not a steady state. In the modern drug trade, we find smugglers with sophisticated methods and technological abilities that exceed our own. Just as the American public has demanded new controls on drunk driving, so are we now seeking to control drunk boating. Our ever growing reliance on foreign oil has put our marine environment at greater and greater risk.

Since the *Exxon Valdez* tragedy in Alaska, nowhere has this risk been made more clear than in my own home State of New Jersey. In just the last 3 years, the number of oilspills in New Jersey waters has almost tripled. Based on the number of spills during the first 5 months of this year, we will have close to 350 incidents in 1990. It is a new and not enviable record.

Just hours after the Valdez incident, a vessel, the *Presidante Rivera,* spilled 300,000 gallons of material into Delaware Bay, southern New Jersey. In just a 2-month period last winter, the waters of the Kill Van Kull and the Arthur Kill off New Jersey saw three significant oilspills. And tragically, these spills did much to undo the hard work of many New Jersey citizens to clean up these environmentally sensitive areas.

The most recent of these spills resulted from the dramatic explosion and fire on the barge *Cibro Savannah.* The Coast Guard, along with the fire department of Linden, NJ, must be commended for its heroic efforts to control that fire. And I especially want to recognize and thank the crew of the Coast Guard cutter *Sturgeon Bay,* who nosed right up to that fiery barge that threatened to blow them clear to Canada.

The fact remains, however, that the *Cibro Savannah* at the time of the explosion was carrying 4.2 million gallons of oil and the potential for an environmental disaster was enormous. And a risk of this magnitude exists in these waters every day.

The public, the Congress, and the administration have all questioned the Coast Guard's current level of readiness to handle the oilspill problem. In many of the spills in New Jersey, the Coast Guard strike team was required to be dispatched from Mobile, Alabama, and were not on the scene to assist in control or cleanup until long after the incident began.

The House and Senate authorizing committees are currently in conference on a major piece of legislation intended to enhance the readiness of the Coast Guard and private sector to handle oilspills. Everyone, including the administration, recognizes the need for this enhanced state of readiness.

So I find it especially disappointing that the budget before us sets only $12.6 million aside for enhanced oilspill activities, well below the amount anticipated by either the House or Senate bill.

We also must not forget that there are many marine environmental problems that cannot and should not be ignored while we focus exclusively or primarily on the problem of oil. A new beach season is upon us in New Jersey and New Jersey's coastline is perhaps its most important natural treasure. In the past, plastics, medical wastes, and sewage have washed up upon our shores or spoiled our fisheries, damaging the tourism industry and livelihood for many.

The Coast Guard's monitoring of sewage sludge dumping has shown improvement, but its enforcement of the plastics dumping ban appears spotty at best.

I intend to insist that our increased efforts to control oilspills do not detract from the Coast Guard's efforts in these other critical areas. We cannot accept an either-or situation.

But we must simultaneously recognize that the Coast Guard cannot always be prepared without the necessary resources. The budget before us represents an increase of 5.9 percent above the level of resources provided in 1990. However, we must recognize that our Defense Subcommittee was required to provide $300 million for the Coast Guard last year.

Compared to the level of resources provided in last year's Department of Transportation budget, the budget request before us just for operating expenses will require a boost of more than 25 percent, an increase of almost one-half of a billion dollars. This request will be difficult, very difficult, to meet. But, as the Commandant knows, I intend to do whatever I can to ensure that the Coast Guard has the necessary resources to execute its many critical missions.

Before I ask my colleagues to speak, I will remind them, since they were not here, that this is Commandant Yost's last hearing before this committee in his duties as Commandant of the Coast Guard. I mentioned before you came in that I personally am very proud of the service that he lent, that he served the agency with distinction and brought it perhaps through its most challenging period in its 200-year history.

The mission continued to enlarge, whether it was the marine pollution patrols that were required, whether it was the drug patrols that we desperately needed, or the continuation and the improvement of the navigation system which has made America in my view the premier country in the world for not only recreational boating, but for commercial shipping as well.

So there is a changing of the guard, and we are pleased to have Admiral Yost with us for his last appearance. And I now ask Senator Grassley if you have an opening statement.

PREPARED STATEMENT OF SENATOR GRASSLEY

Senator **GRASSLEY**. A very short opening statement, and I am going to put it in the record, and I am also going to submit two not very complicated questions for response in writing, Admiral Yost.

And I appreciate the cooperation that you have given me as a member of this subcommittee in the short period of time that I have been on it, and good luck in your future assignments.

Also, I would beg leave. Unlike most of the time I would be going because of conflict, I do not feel very well, so I am going to leave.

[The statement follows:]

STATEMENT OF SENATOR GRASSLEY

Thank you, Mr. Chairman. And thank you Admiral Yost for attending today's hearing.

Let me be frank from the outset, Admiral Yost. The Coast Guard has very few direct dealings in the State of Iowa. I get very few letters from Iowa constituents concerned about the Coast Guard. When I travel the State of Iowa, and hold town meetings * * * very few people ask me questions about the Coast Guard.

I am sure this does not come as a great surprise to you.

But let me also say that I fully appreciate the crucial role that the Coast Guard plays in the United States * * * and specifically for the continued growth of the United States' economy. As you mention in your opening statement, the Coast Guard is referred to as the "guardians of the sea." Without the Coast Guard playing this crucial role, commerce would come to a standstill.

I look forward to working with Admiral Yost and the Coast Guard as we work on this year's appropriations. Thank you.

Senator **LAUTENBERG**. We have never—I do not remember Senator Grassley not feeling well.

Senator **GRASSLEY**. It is flu.

Senator **LAUTENBERG**. Since he comes from that great State where only healthful foods, at least that was until last week, the cows and all that. But we forgive you and thank you for your ever-active participation.

Senator **GRASSLEY**. Thank you.

Senator **LAUTENBERG**. Senator Kasten.

STATEMENT OF SENATOR KASTEN

Senator **KASTEN**. Mr. Chairman, thank you, and we welcome Admiral Yost today to present the fiscal year 1991 budget for the Coast Guard.

Less than an hour ago, the Commerce Committee held a hearing on the presentation of Admiral Kime to follow Admiral Yost as the commander of the U.S. Coast Guard. And although Admiral Yost's leadership is going to be a hard act to follow, I am sure that the new Commandant will be as fine a spokesman for, and a leader of, the Coast Guard.

As you know, Mr. Chairman, I serve on both of the committees, and I look forward to working with Admiral Kime.

Admiral, I know that this subcommittee will do, as we have in the past, all we can to meet the request of the Coast Guard and the needs of the Coast Guard. The work our chairman and ranking member have put in, the work that they have put in to secure Department of Defense support for a portion of your budget, has added to the Coast Guard immeasurably, as you point out in your statement.

Being from the Great Lakes region, I appreciate the assistance of the Coast Guard keeping the cutter *Mackinaw* available for icebreaking operations in the Lakes.

And finally, I just want to touch very briefly on the importance of the air rescue operation for the Wisconsin waters of Lake Michigan. They rely on equipment in Illinois and Michigan. This makes the reliability of the equipment all the more important, and it is obviously important to the Coast Guard as well.

I urge the Coast Guard to give increased consideration to the commercially available alternative to the accident- and also maintenance-prone LTS-101 engine. I believe you once referred to it as a "lemon" before the House Transportation Appropriations Committee. If an alternative proves acceptable, the alternative would seem to meet both cost and timing considerations that are not available from the prototype T-800 engine which is being developed for the Army.

But again, I commend you, Admiral for the manner in which you have led the Coast Guard in its many important missions. I agree with the statement of the chairman suggesting that these have been certainly among the most challenging times for the Coast Guard. And I wish you the best as you close out your career of service to your country.

PREPARED STATEMENT

Mr. Chairman, I am going to submit some questions for the record concerning the helicopter engine replacement, and I thank you.

[The statement follows:]

STATEMENT OF SENATOR KASTEN

Mr. Chairman, we welcome Admiral Yost today to present the fiscal year 1991 budget for the Coast Guard. Less than an hour ago the Commerce Committee held a hearing on the President's nomination of Admiral Kime to follow Admiral Yost as Commandant of the U.S. Coast Guard. Though Admiral Yost's leadership will be a hard act to follow, I am sure the new Commandant will be as fine a spokesman for, and leader of, the Coast Guard.

Admiral, I know that this subcommittee will do all that it can to meet the request of the Coast Guard once again. The work that our Chairman and ranking member have put in to secure Department of Defense support for a portion of your budget has aided the Coast Guard immeasurably as you point our in your statement.

Being from the Great Lakes region, I appreciate the assistance of the Coast Guard in keeping the cutter *Mackinaw* available for ice breaking operations in the Lakes.

Finally, the air rescue operations for the Wisconsin waters of Lake Michigan rely on equipment in Illinois and Michigan. This makes the reliability of the equipment all the more important. It is obviously important to the Coast Guard as well.

I urge the Coast Guard to give increased consideration to the commercially available alternative to the accident- and maintenance-prone LTS-101 engine, you referred to as "a lemon" before the House Transportation Appropriations Subcommittee. If it proves acceptable, this alternative would seem to meet both cost and timing considerations that are not available from the prototype T-800 engine being developed for the Army.

Again, I commend you Admiral for the manner in which you have led the Coast Guard in its many important missions, and I wish you all the best as you close out your career of service to your country.

Mr. Chairman, I will submit some questions for the record concerning the helicopter engine replacement.

Senator LAUTENBERG. Thank you very much, Senator Kasten, for your interest in the Coast Guard as well as all other aspects of our portfolio.

Now, Admiral Yost, we invite you to give your testimony and we will listen with interest.

STATEMENT OF ADMIRAL YOST

Admiral YOST. Thank you very much. Good morning, Mr. Chairman.

As you suggest, I will condense my statement and ask that my complete statement be included in the record.

Senator LAUTENBERG. Without objection.

Admiral YOST. I am pleased to meet with you and the other members of this distinguished subcommittee to discuss the Coast Guard's fiscal year 1991 budget request and the Coast Guard's operations in general.

Accompanying me are my Chief of the Programs Division, Capt. Ken Thompson, on my right; and the Chief of the Budget Division, Capt. Dave Spade, on my left.

Mr. Chairman, I want to thank you and the other members of your subcommittee for your efforts in obtaining funding for the Coast Guard in fiscal year 1990. Your strong support was instrumental in enabling us to maintain full operations and press forward with critical replacements for our capital plant and other important initiatives.

We look forward to working closely with you so that the Coast Guard can continue to be responsive in meeting changing national needs and priorities.

Mr. Chairman, you have been a strong chairman. Just as important and maybe more important, you have been a principled chairman. You have never wavered with the political winds. I have always known exactly where you stood. You have always been very forthright and forthcoming with me. We have never had an occasion to have a misunderstanding. We always understood fully where the other man was coming from, and I cannot tell you how important that is to somebody in the administration working with Congress.

I hope you do run for another term and you do stay as our chairman. If you want to run for President, you have my vote. But whatever, sir, thank you for what you have done for us.

Senator LAUTENBERG. I wanted Senator Kasten to understand that I was not announcing anything unusual here this morning. [Laughter.]

Admiral YOST. Maybe I can take this opportunity to announce that upon leaving the Coast Guard I will become President of the James Madison Foundation, an educational foundation, a patriotic foundation, here in town. And I know how close you are to the business of education in this country, and so I hope that our association will remain current, sir.

As my Coast Guard career and tenure as Commandant come to a close, I view with pride this efficient, flexible, and disciplined organization which is entering its third century of service to this Nation.

In order to maintain our multimission capabilities and to respond to the changing priorities of today and tomorrow, the Coast Guard must have the necessary equipment, people, training, and operating funds. The President's budget request for the Coast Guard in fiscal year 1991 will allow us to maintain our current level of operations while giving us the flexibility to respond to new emerging priorities.

Our Operating Expenses request allows us to continue our traditional missions at current levels, with minimal increases to support added emphasis in certain key mission areas or to operate newly acquired capital assets.

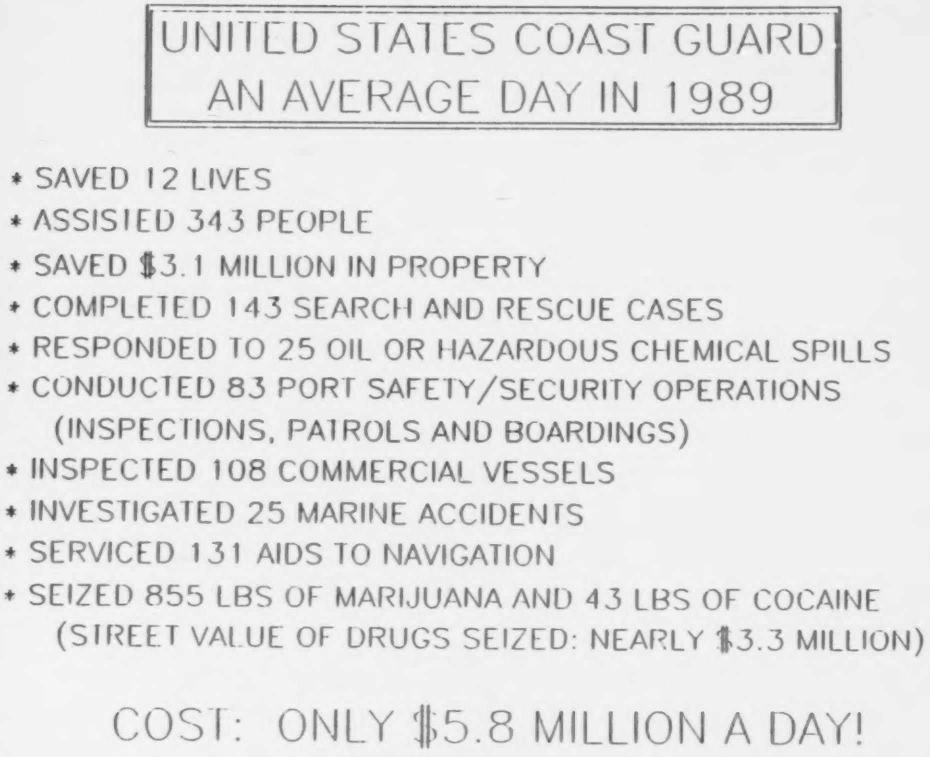
Our Acquisition, Construction and Improvements request is largely comprised of multiyear projects to acquire replacements or improve existing capital assets. Particular emphasis has been placed on improving the condition of our deteriorating shore plant.

Our 1991 budget request anticipated that an oilspill bill would be a top congressional priority. It therefore includes new line items totaling $12.6 million. However, this amount reflects only a fraction of the funding needed to carry out the new responsibilities and tasks described in either the House or Senate version of the bill.

Additional funding and personnel will be required. And I would say tangentially, this is the first time that I know of that the Coast Guard has attempted to budget for legislation that was not yet passed. Whether that was wise or not remains to be seen, because we certainly underestimated the cost of what that legislation would provide.

We in the Coast Guard are eager to begin our third century of service to America by doing whatever may be necessary as the Nation's principal peacetime maritime operating agency. In fulfilling our many roles, we will play an integral part in implementing the new national transportation policy.

I would like to take a few minutes to show you some visual aids which help explain our budget request.



UNITED STATES COAST GUARD
AN AVERAGE DAY IN 1989

- SAVED 12 LIVES
- ASSISTED 343 PEOPLE
- SAVED $3.1 MILLION IN PROPERTY
- COMPLETED 143 SEARCH AND RESCUE CASES
- RESPONDED TO 25 OIL OR HAZARDOUS CHEMICAL SPILLS
- CONDUCTED 83 PORT SAFETY/SECURITY OPERATIONS (INSPECTIONS, PATROLS AND BOARDINGS)
- INSPECTED 108 COMMERCIAL VESSELS
- INVESTIGATED 25 MARINE ACCIDENTS
- SERVICED 131 AIDS TO NAVIGATION
- SEIZED 855 LBS OF MARIJUANA AND 43 LBS OF COCAINE (STREET VALUE OF DRUGS SEIZED: NEARLY $3.3 MILLION)

COST: ONLY $5.8 MILLION A DAY!

[CHART 1]

Of course, there is no such thing as an average day, but you can see, Mr. Chairman, that the Coast Guard gives substantial value to the Nation for an operating cost of only $5.8 million per day.

I looked and up in that list of things we saved twelve lives and 3.1 million dollars' worth of property. A life must be worth at least $1 million. Mine is and I am sure yours is, sir.

Senator LAUTENBERG. We will have to let others judge, Commandant. [Laughter.]

But I will take an assumption like that.

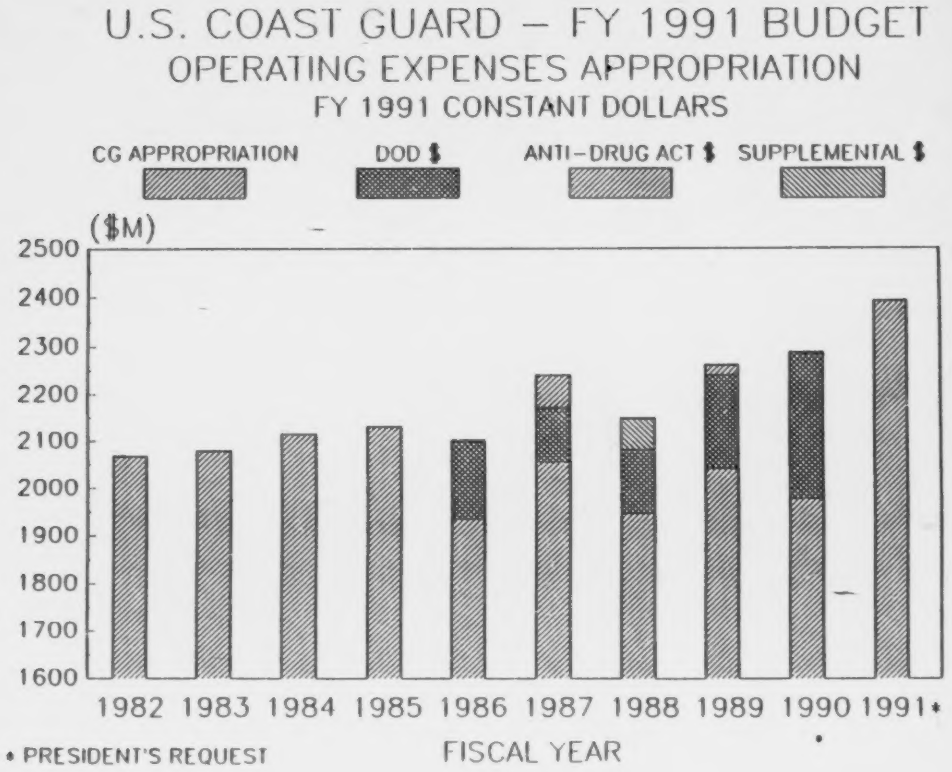
Am I correct that both charts I am seeing and the charts the audience are seeing say the same thing?

Admiral YOST. Yes, sir.

Senator LAUTENBERG. I just wanted to make sure the audience is not getting a different version. [Laughter.]

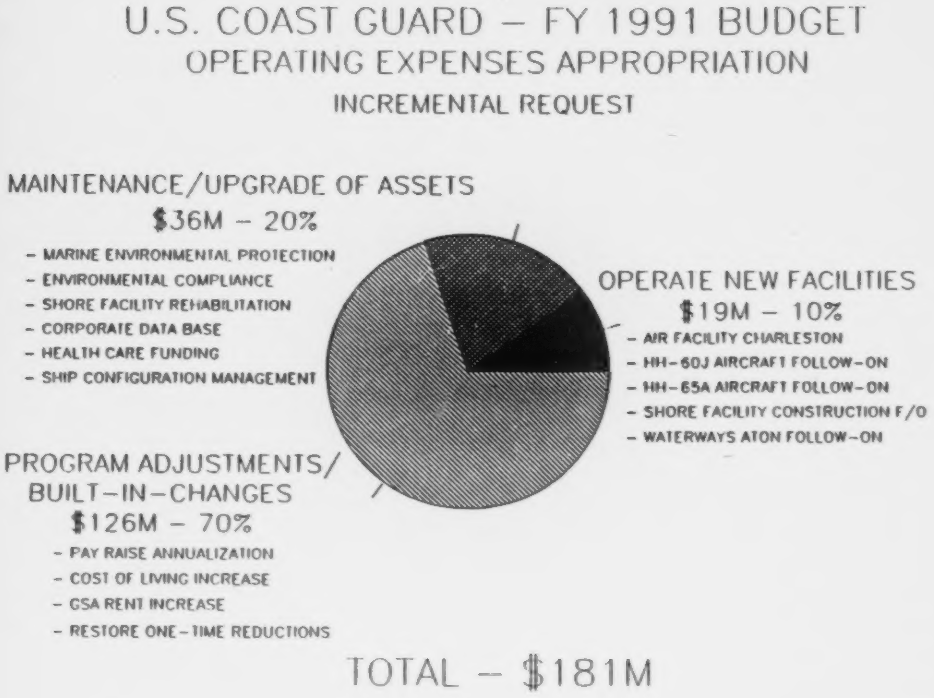
Admiral YOST. It seems to me that I may be returning over a 100-percent profit to the country. I say that in passing, sir, with a $5.8 million a day cost.

In any event, let me see the second slide.



[Chart 2]

The red and green colored bars on this slide show that in recent years the Coast Guard operating expense has been funded from different sources. I reiterate my position, the administration's position, that the Coast Guard should be fully funded within the transportation appropriation if that is at all possible.

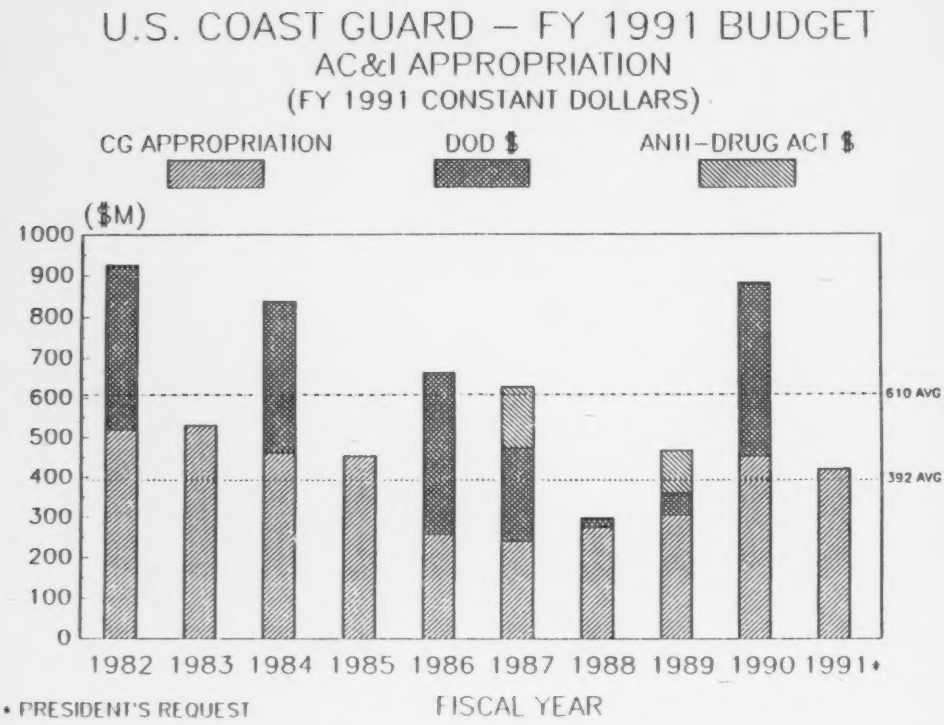


[CHART 3]

Our next graph categorizes our $181 million incremental request after annualizing last year's funding from DOD. You see that $126 million or 70 percent of the request is for built-in changes and adjustments over which we have little control: pay raises, entitlements, rent increases, and cost of living.

The sum of $36 million is for maintaining requirements or to upgrade capital assets. Included in this category are health care costs in excess of cost of living adjustments, establishment of a shipboard configuration management system to improve fleet readiness, and funds to sustain our leadership role in protecting the marine environment.

The remaining 10 percent or $19 million is required to operate and maintain new capital assets, such as the new air facility in Charleston, the new HH-60J helicopters, and the HH-65 aircraft, and some new shore facilities.



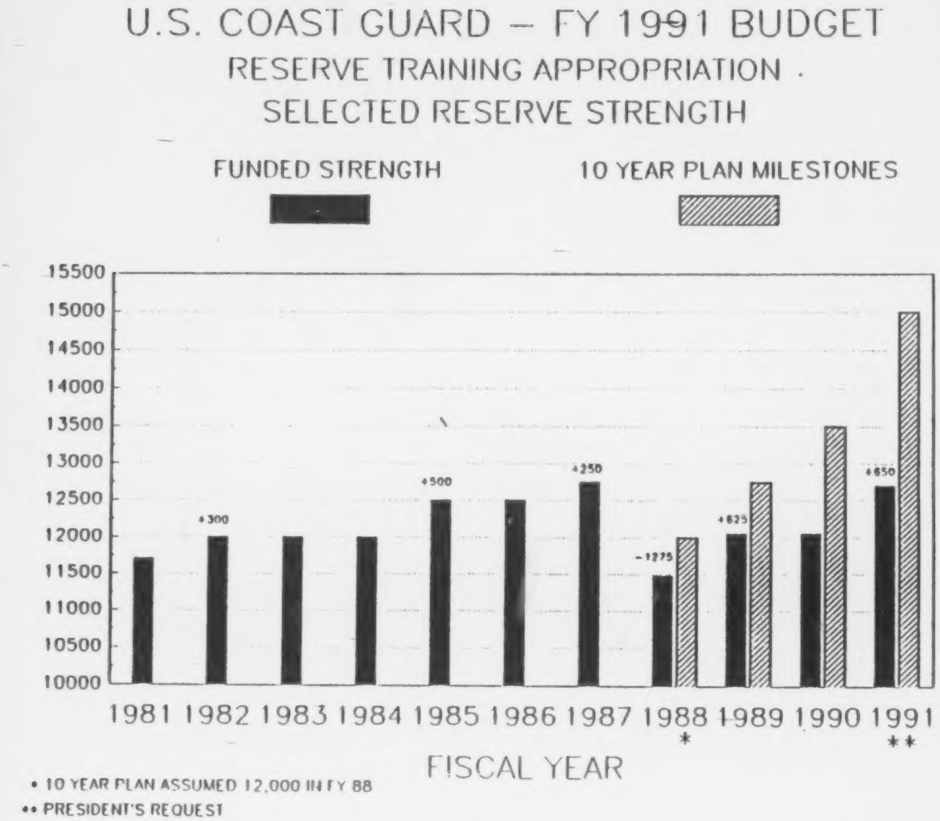
[CHART 4]

The next graph shows our AC&I appropriation history. Multiyear projects in this request include the continuation of the FRAM Program for 378-foot cutters, the buoy tender replacement programs, the renovation programs for our 210-foot cutters and our buoy tenders, and construction of sorely needed family housing.

This AC&I request is significantly lower than the average annual AC&I funding appropriated by Congress over the past 10 years. This is because much of the Coast Guard's AC&I funding during this period came from sources outside the Department of Transportation, particularly the Department of Defense, and additionally, the polar icebreaker replacement, a very costly single line item, was funded from the DOD appropriation in fiscal year 1990. Funding for that one ship was nearly as much as the total AC&I funding in the Coast Guard appropriation.

The President's budget will meet our AC&I needs in fiscal year 1991.

As certain of our new capital projects, such as the buoy tender and patrol boat replacement programs, are further developed in future years, we can expect a major growth in our AC&I funding requirement.



[CHART 5]

This last graph shows the recent history of our Selected Reserve strength. The fiscal year 1991 requested increase of $7 million includes $4 million to increase the Selected Reserve force size by 650 people, to a level of 12,700. This level will allow us to meet 46 percent of the full mobilization requirements. I should say, only 46 percent.

Our plan calls for a systematic annual growth to reach a strength that will allow us to meet 95 percent of our highest priority requirements.

Reserves made important contributions to the Coast Guard, as exhibited in our response to the *Exxon Valdez* oilspill, Hurricane Hugo, and the San Francisco earthquake.

Our overall goals for the fiscal year 1991 budget are reflected in this final slide.

UNITED STATES COAST GUARD
FY 1991 BUDGET GOALS

- RESPOND TO NATIONAL PRIORITIES SUCH AS DRUG CONTROL AND ENVIRONMENTAL PROTECTION
- CONTINUE CURRENT SERVICES WITH ADEQUATELY STAFFED UNITS
- MEET NEW STATUTORY REQUIREMENTS
- FULLY STAFF AND OPERATE NEW CAPITAL ASSETS
- UPGRADE OR REPLACE AIRCRAFT AND CUTTER FLEETS
- RENOVATE OR REPLACE AGING SHORE FACILITIES

[CHART 6]

In order to continue our multimission service to this Nation, we must be funded to support ongoing levels of operations, address changing national priorities, and provide for replacement of capital assets as they reach the end of their service lives.

PREPARED STATEMENT

Mr. Chairman, President Bush and Secretary Skinner are both in full support of the Coast Guard's 1991 budget. I again need your support and, more than that, your leadership and the support of this subcommittee to obtain full funding for the Coast Guard.

I will be happy to respond to your questions, sir.

[The statement follows:]

STATEMENT OF ADMIRAL YOST

Good morning, Mr. Chairman. I am pleased to appear before this distinguished subcommittee today to review and discuss the Coast Guard's fiscal year 1991 budget request.

Accompanying me today are the Chief of the Programs Division, Captain Thompson, and the Chief of the Budget Division, Captain Spade.

Mr. Chairman, on behalf of Coast Guard men and women servicewide, I thank you and the other members of your subcommittee for your efforts and strong support which were instrumental in obtaining funding for the Coast Guard in fiscal year 1990. It permits us to maintain full operations and still press forward with critical replacements in our capital plant and other important initiatives.

As my Coast Guard career and tenure as Commandant come to a close, I view with pride this efficient, flexible, and disciplined organization which is entering its third century of proud service to the Nation. For two hundred years the Coast Guard and its organizational ancestors have defended and protected lives, property and natural resources in the maritime environment, enforced laws, and played a significant role in the defense of our country. Throughout its history, the Coast

Guard has demonstrated a remarkable flexibility in meeting changing national needs and priorities.

We are a humanitarian service, and in recent years, have been called the "guardians of the sea." That label is appropriate, considering our many missions which share the common thread of protecting lives, property and national resources. These missions include: Protecting lives and property through the search & rescue and maritime safety programs; guarding our maritime borders against illegal drugs and other contraband; enforcing the conservation of ocean fisheries; supporting national security, scientific, and environmental interests in the polar regions; and preventing—and if necessary, mitigating—damage to our marine environment. In addition, Coast Guard missions promote a safe and efficient maritime link to global and many domestic markets.

Our various peacetime roles also provide a ready force-in-being of trained personnel, vessels, aircraft and equipment to respond immediately to national security needs, in the event of war or national emergency.

The efficiency and effectiveness of the Coast Guard are perhaps best evidenced by the fact that a number of other countries model their own naval or coast guard forces after our service. We are widely in demand to share our operational expertise and training. I see our role in the international arena growing in the years ahead.

In order to continue our multi-mission service to this Nation and others, we must be funded to support ongoing levels of operations, address changing national priorities and provide for replacement of capital assets as they reach the end of their service lives.

As you know, the U.S. Coast Guard is one of the Nation's five armed forces. Changing national defense requirements brought about by events in Europe will increase the importance of having a force-in-being to perform the missions of a peacetime Coast Guard while, at the same time, providing defense capability. In addition, national priorities—such as the war on drugs and protection of the environment—require modest increases in funding for the Coast Guard.

The fiscal year 1991 total budget authority request represents an increase of less than six percent over the level enacted for FY 1990. The bulk of the request is attributable to cost of living and other built-in changes in the operating expenses appropriation, continuation of ongoing capital improvement projects, and progress toward a long-range goal to bring our selected reserve up to required strength. Only a small portion of the request funds new initiatives in response to these national priorities.

BUDGET TOTALS

The total budget authority we are requesting from this committee is $3,393.5 million, an increase of $194 million over the amount enacted for fiscal year 1990 including support in kind from DOD. As always, the largest portion of the total request is for operating expenses (OE). This $2,391.4 million represents 70.5 percent of the total request; the OE appropriation funds the salaries and benefits for our personnel, and the operation and maintenance of Coast Guard ships, aircraft and shore facilities.

Our major capital improvements are funded by the acquisition, construction and improvements (AC&I) appropriation. Our fiscal year 1991 AC&I request of $419.5 million is 12.3 percent of the total request.

The $78.9 million requested for reserve training will support a selected reserve strength of 12,700, an increase of 650 over the estimated fiscal year 1990 year-end strength.

We are requesting $23 million for research, development, test and evaluation; this funding will develop hardware, procedures and systems to meet future requirements, and improve the execution of existing Coast Guard missions.

Under current law, our request identifies $6.4 million as needed to fund alteration of three bridges which have been found to be obstructions to marine navigation. While the budget proposes to transfer the program, Congress has not yet approved the transfer of the bridge alteration program to the Army Corps of Engineers. As long as the Coast Guard retains the bridge program, these funds will be required in the Coast Guard budget.

In order to provide financial assistance to the States for the development and implementation of a coordinated national recreational boating safety program, we are asking that $30 million be appropriated to the boat safety account.

Our request for $437.3 million in the retired pay appropriation will fund annuities and medical entitlements for retired military personnel, their dependents and survivors.

For the first time, our request includes funds for a separate environmental compliance and restoration appropriation, which was established by the Coast Guard Authorization Act of 1989. This request for $7 million is needed for the Coast Guard to carry out its environmental compliance and restoration responsibilities resulting from the operation of former and current Coast Guard facilities. Prior to the fiscal year 1991 request, activities of this nature were included in the acquisition, construction and improvements appropriation.

Overall, our request is for a level of 38,421 military and 5,702 civilian full time equivalents.

OPERATING EXPENSES

We are requesting a $181 million increase in our operating expenses appropriation, to a level of $2,391.4 million. Program adjustments and built-in-changes such as pay raise annualization, cost of living adjustment and GSA rent increase account for $126 million (70 percent) of the increase.

Twenty percent, or $36 million, of the increase is to maintain and upgrade certain Coast Guard assets. Included in this category are health care cost increases in excess of the cost of living adjustment; establishment of a shipboard configuration management system to improve fleet readiness; sustaining our leadership role in protecting the marine environment; and much-needed rehabilitation of deteriorated shore facilities.

The remaining 10 percent of the OE increase ($19 million) is requested to operate and maintain new capital assets such as the air facility in Charleston, South Carolina; HH-60J medium range recovery helicopters; new coastal small-boat stations; and land-based aerostats.

Our fiscal year 1991 request includes, as part of the funding base, $300 million received from the Defense Department appropriation in fiscal year 1990 ($160 million cash transfer, and $140 million support-in-kind). As in previous years, these funds which Congress provided to the Coast Guard via DOD sources were absolutely essential. Without them, we simply couldn't have maintained operations anywhere near required levels. While I am grateful to our supporters in Congress who have helped keep us in business by bringing about these transfers, I reiterate my position—the administration's position—that the Coast Guard should be fully funded within the transportation appropriation. I consider it critical that the entire Coast Guard budget be accounted for in Function 400, in fiscal year 1991 and thereafter.

In summary, our operating expenses budget request allows us to continue performing our traditional missions at current levels. Minimal increases are requested to support added emphasis in certain key mission areas or to operate newly-acquired capital assets.

ACQUISITION, CONSTRUCTION AND IMPROVEMENTS [AC&I]

The fiscal year 1991 AC&I budget request is once again largely comprised of multi-year projects to acquire replacements, or improve existing capital assets; a particular emphasis has been placed on improving the condition of our deteriorating shore plant. Where possible, major projects are phased to spread costs over a number of years. Multi-year projects in the FY91 request include the Fleet Renovation and Modernization (FRAM) Program for 378-foot cutters, the buoy tender replacement programs, renovation programs for 210-foot cutters and buoy tenders, the Motor Lifeboat Replacement Program, procurement of HH-60J helicopters, and construction of sorely needed family housing units.

New project starts for FY 1991 account for $125 million, or 29 percent of the AC&I request. Many of these represent replacement, renovation or upgrading of existing assets. Among other things, these include new buoy boats, replacement helicopters for drug law enforcement, information resources management improvements, and new or improved search and rescue stations in various locations. Other projects, such as a vessel identification system, configuration management, the new air facility in Charleston, and pollution strike team equipment, have been included in response to identified needs or requirements set forth by Congress.

Finally, the AC&I budget includes a small amount for project support expenses and minor improvement projects on waterways and at shore facilities Coast Guardwide.

This AC&I request is significantly lower than the average annual AC&I funding appropriated by Congress over the past ten years. This is because much of the Coast Guard's AC&I funding during this period came from sources outside the Department of Transportation, particularly the Department of Defense.

Additionally, the polar icebreaker replacement, a very costly single line-item, was funded from the DOD appropriation in fiscal year 1990; funding for that one ship was nearly as much as the total AC&I funding in the Coast Guard's appropriation. The President's budget will meet our AC&I needs for FY 1991. As certain of our new capital projects—such as the buoy tender and patrol boat replacement programs—are further developed in future years, we can expect our AC&I funding requirements to increase.

RESERVE TRAINING

The Coast Guard Reserve provides trained personnel for active duty in the Coast Guard in time of armed conflict, national emergency, or natural and man-made disasters. As part of their training to meet these responsibilities, reservists support the active duty force in the performance of peacetime missions, during normal and peak periods of operations, as well as in times of domestic emergencies. For example, reservists made important contributions to the Coast Guard's response to the Exxon Valdez oilspill, hurricane Hugo, and the San Francisco earthquake. The fiscal year 1991 requested increase for reserve of $7 million includes $4 million to increase the selected Reserve force size to 12,700. This level will allow the Reserve to meet 64 percent of its minimum mobilization requirements.

OILSPILL LEGISLATION

The comprehensive oilspill legislation currently under consideration in Congress appears certain to assign significant new responsibilities and tasks to the Coast Guard. While developing the fiscal year 1991 budget request, we anticipated that an oilspill bill would be a top congressional priority, and included new line items totalling $12.6 million as a "place holder" for environmental protection. However, this amount reflects only a fraction of the funding needed to carry out the tasks described in either the House or Senate version of the bill. The Coast Guard will not be able to carry out these new tasks without new funding and additional personnel.

SUMMARY

We in the Coast Guard are eager to begin our third century of service to America, fulfilling our role as "guardians of the sea" by ensuring safety of lives at sea, combatting the influx of illegal drugs, protecting the marine environment, contributing to national security, and doing whatever else may be necessary as the Nation's principal peacetime maritime operating agency. In order to maintain our multi-mission capabilities and respond to the changing priorities of today and tomorrow, the Coast Guard must have the necessary equipment, people, training and operating funds. This budget request will maintain our current level of operations, and allow the flexibility to respond to new and emerging priorities.

I ask for your support in obtaining full funding for the Coast Guard.

I will be happy to respond to any questions you or the other members of the subcommittee might have.

OILSPILLS IN NEW YORK AND NEW JERSEY

Senator LAUTENBERG. Thank you very much, Admiral.

I would like to get started with a discussion of the problems that we have off the New Jersey coastline and the rivers separating New York and New Jersey. In just a 2-month period this past winter, the waters of Kill Van Kull and Arthur Kill saw three significant oilspills. In just the past 3 years, the number of spills off New Jersey has almost tripled, while the amount of oil transported has increased only modestly.

Now, I said in my opening remarks and I repeat here that, based on the first 5 months of the year, we can project close to 350 spills in New Jersey in 1990, a most unfortunate record.

What do you see as the factors for this kind of rapid growth in spills? In the New Jersey region, let us talk about particularly.

Admiral YOST. Well, I am very discouraged to have to report to you that at 0300 this morning another barge was holed in the Kill

Van Kull. Unfortunately, 5,000 gallons of gasoline were spilled into the river before it was noticed. So I guess we are on track as far as the amount of product being spilled in that area.

We have three Coast Guard marine casualty investigations ongoing on the previous three major spills. These investigations have not been completed yet, so I am not at complete liberty to discuss them. But they do not point out any known shortcomings in our Coast Guard onscene coordinator response. They do not show any trend particularly in the industry that any one thing is wrong.

A pipeline was ruptured in one case. This morning a gasoline barge showed up with two holes in it nobody knew about; they filled it up with gasoline and out comes the gasoline from the holes. An explosion that we do not have any reason for in another case.

So there does not seem to be any trend, except oil and product continues to be spilled in this area.

NATIONAL OILSPILL TRENDS

Senator LAUTENBERG. Do we see this kind of a trend around the rest of the country in similar type situations, where there is a lot of material transported?

Admiral YOST. No; we do not. But we do see a heightening of the awareness of the American people, their political leaders, the media, and the administration. Whenever there is a spill, for instance, my highers on up through the administration want to be notified immediately, and spills like this go right up the line.

The media insists on being notified, and stories are written on it. So there is a heightening of awareness that again exaggerates the number of spills compared to previous years.

We do not have that kind of a major step function in numbers.

Senator LAUTENBERG. Do you see it in the Gulf of Mexico? Do you see it in other significant oil transporting regions?

Admiral YOST. We do not see this major increase step function in numbers that we see, that we think we are seeing in the Arthur Kill and the Kill Van Kull.

Senator LAUTENBERG. In the Arthur Kill and that area, most of these spills represent fairly devastating accidents because of the fragility of the environment there. The numbers of spills in my region are greater, and I think it is fair to say that, as we look around the coast, California this last year, for example, we have had some fairly major accidents, major spills.

Even though the frequency of occurrences has not increased substantially perhaps you are absolutely right that the public is not only aware, but they are frightened by the damage to the environment.

A cleaner environment of all sorts—air, water, et cetera—is being demanded and therefore there is more attention on it. The number of spills concerns me, and included in my concern, I think you are aware, is the fact that the Office of Pipeline Safety had an enormous exemption for low-pressure liquid pipelines, and now we are beginning to realize that a lot of these have just deteriorated with age. And since the pipelines are not inspected on a routine basis, there is potentially a much greater problem lying underneath the ground or underneath the water than we have been aware of.

Admiral YOST. I think it is fair to say as we look at the legislation that is now being conferenced, that legislation does anticipate more strike teams, more strike team capability. However the legislation comes out, I think there will be additional strike team capability, and we are going to have to look very, very carefully at where those strike teams go.

You are not going to be able to ignore the fact that Philadelphia, Delaware Bay, New York harbor, the Kill Van Kull, et cetera, are a major transportation hub for oil and oil products in this country. That is one of the places we are going to have to look as we decide how to site these strike teams and their equipment.

NEW STRIKE TEAMS AND OILSPILL RESOURCES

Senator LAUTENBERG. One of the things that I indicated in my prior conversation with Admiral Kime is that we would like to see one of those strike teams right in our area, because there is just too much spill activity. It is a busy traffic area also. There are a lot of storage facilities, a lot of refinement taking place there.

Those harbors between New York and the Philadelphia harbor carry the largest quantities of imported oil, on the east coast, and we just have to be prepared to respond. Also, I ask those who will continue with the senior management of the Coast Guard to be aware of the fact that the traffic demands, the clean operating habits, are just going to be more demanding of Coast Guard intervention and surveillance. We are going to be dredging in the Kills area and closing down a navigation lane there. That is going to present us with a potential problem, because we are now going to be shipping the same volume of material in a narrower space.

I asked the GAO recently, Paul, to review the adequacy of resources for oilspills in the ports of Philadelphia and New York, and I will share with you their findings which I am sure you already have, but their comments. More than 70 percent of the oil entering our Eastern United States does so on ships transiting Delaware Bay.

The Coast Guard recognizes that the ports of Philadelphia are vulnerable to spills of up to 2 million gallons. Yet the local resources are currently adequate to handle not more than 50,000 gallons.

This past June, the Delaware River had a disastrous spill, a spill six times that size, 300,000 gallons. The ports of Philadelphia have had four spills in the last 5 years that exceeded 100,000 gallons.

The contingency plan for the Port of New York can identify an adequate level of equipment, but not trained personnel, to handle a big spill. The GAO found the level of private industry resources assumed by the Coast Guard to be available for spill response in the Delaware Bay simply is not available.

What kind of resources does the Coast Guard really need to deal with these shortcomings? What about the additional statutory authority contained in the oilspill bill? Is the new authority really necessary to address these problems?

Admiral YOST. You say do we need additional authority? We need some additional authority in that oilspill bill, some authorization language. But more than that, we need money. Eighty-five percent of what we need in the oilspill business we do not need additional legislation for. But we do need a lot of funds to build up the strike teams from two to whatever number is appropriate.

OILSPILL LEGISLATION

Senator LAUTENBERG. Just to confirm then, you have the necessary authority to move on these problems and are not as much concerned about the statutory authority as you are with the funding?

Admiral YOST. That is true. There are some very important things that are not very expensive that we would like to have legislation for, and those things are: Gaining access to the national driver data base for alcohol and drug abuse; establishing grounds for suspension and revocation of licenses; and establishing grounds for relief of the master of a vessel.

There are a number of things I could give you in writing, that would cost almost nothing, that would be good to have authorizing legislation for.

[The information follows:]

Several of the tasks assigned to the Coast Guard by the bill require legislation to establish the necessary authority. One of the more important of these provisions is directing spiller clean-up action without the prerequisite of federalization. This would be very useful and significantly enhance the On Scene Coordinator's [OSC] ability to oversee effective oilspill cleanup, yet would require no added resources. Legislation is also necessary to give the Coast Guard access to the National Driver Record [NDR] data base and to allow us to promulgate regulations which establish such things as: grounds for denial or revocation of merchant mariner documents [MMD's], grounds for relief of vessel masters, and piloting and manning requirements. While many of these types of taskings will not be expensive to implement, they will require legislative action.

Other provisions are currently within our regulatory authority, but will require significant additional resources prior to implementation. At this point, it appears that the vast majority of these provisions are contained in the portions of the bill that address federal removal authority, contingency planning, and response systems. Strike teams and contingency planners are examples of the requirements which are presently within our regulatory authority, but will be very resource intensive.

Whether or not the Coast Guard is currently authorized to carry out the tasks in the bill, I cannot overemphasize that we cannot assume the additional duties without significant new revenues and resources. Of course, the exact costs cannot be determined until the legislation is finalized.

Admiral YOST. The real guts of the matter, though, are there is a whole bunch of things that we need money to do, including strike teams and equipment.

REVIEW OF OILSPILL CONTINGENCY PLANS

Senator LAUTENBERG. Last year the Coast Guard initiated a review of contingency plans for each of the captains of the port across the country. What is the status of that review?

Admiral YOST. Those reviews have been completed. We found almost without exception the contingency plans were not based on the worst possible spill. They were based on what a reasonable person might expect in a spill. And so when you get an *Exxon Valdez* that is beyond what anybody ever imagined, the contingency plan just was not there to handle it.

And as we looked at every port, the same thing existed. So we rewrote all of those contingency plans, reviewed them, rewrote them, upgraded the level of spill that we addressed to what could be the worst case spill in that particular area, looking at the kind of tank barges and tankers that serve that port.

Senator Lautenberg. So the vulnerability around the country is generally the same as in the Philadelphia and New York ports?

Admiral Yost. Well, the contingency plans now address the vulnerability. The equipment still is not there to address it, but at least the planning now does.

We saw that in Huntington Beach, CA, where we had just updated that contingency plan, just had an exercise with local industry and local government based on the new contingency plan, and then we had the fairly major spill off of Huntington Beach. The plan was there, it had been exercised, it was upgraded, and that was a textbook cleanup case. Everything worked well, and that is a good example of what happens if your contingency plans meet the worst possible case and have been exercised.

FUNDING OILSPILL RESOURCES

Senator Lautenberg. Secretary Skinner gave us a preliminary cost estimate of the oilspill bill that ranged from $75 to $117 million, far more than the $12.6 million that you have included in the current request for these activities.

If you do not need additional authority to request additional Coast Guard resources to handle spills, why have you not boosted your efforts in this area in the past to address these shortfalls?

Admiral Yost. Going into this budget year, I used a method that had been extremely successful within the administration, within the administration competition for budgets under the Gramm-Rudman ceilings, and that technique that I had used before was to put in what I call a drug wedge, that is a wedge of new money that I felt that I needed to address the drug problem.

In this case I put in a wedge of new money that I felt I needed to address the oil pollution problem. Now, that was in the middle of the *Exxon Valdez* case. It was prior to the time that Congress had really examined what we needed. It was prior to the time that there was either an administration bill or a House or a Senate bill.

And that oilspill wedge was very difficult at that point in time to defend within the administration. I am very pleased that we got $12 million as an oilspill wedge in this budget. It took a lot of effort on the part of many people in the administration to keep that in there against the competition from other needs throughout the Government, and prior to the time that either the administration or the Congress had put together a bill to address oilspills.

So that was a wedge that we got in there. It does not address what we need, but it is a start. It is better than if we had not put anything in.

Senator Lautenberg. Does that mean that you only need $12.6 million to fund the oilspill problem?

Admiral Yost. To fund the oilspill legislation, in the administration's position as well as the Senate and the House, we need somewhere between $70 and $112 million. The $12 million that we put in was prior to the time that—this budget was made up almost 1 year ago, prior to the time that we really had a clear view of what the hearings in Congress would produce, et cetera.

OILSPILL PREVENTION AND RESPONSE IN NEW YORK AND PHILADELPHIA

Senator LAUTENBERG. What do you think we will see by way of prevention programs and response capabilities in New York and Philadelphia in the next year, with or without an oilspill bill?

Admiral YOST. Well, without an oilspill bill or, even more to the point, without budget for an oilspill bill, because I think that the probability is we will have a bill—whether it will have a funding mechanism that goes with it, there is still considerable doubt. So without funding, I cannot visualize increasing our efforts in marine pollution above what we have now.

I have a floor congressionally mandated in drug interdiction. I have constraints on removing any search and rescue stations anyplace in the world, any units of any kind, and I have found that at least one or two stations are critical that I had removed before without enough thought.

Sir, I do not see any way to divert money from other Coast Guard programs into this oilspill program. And we are going to need new money in it, and the $12 million in this budget will not even scratch the surface. So whether there is new money that goes into this budget due to the oilspill legislation or whether it is a follow-on budget, I do not know.

FISCAL YEAR 1991 OILSPILL RESOURCES FUNDING

Senator LAUTENBERG. What actions will the $12.6 million buy in terms of enhanced oilspill readiness?

Admiral YOST. I may have to provide that for the record. I am not sure I have it with me.

Do you have it? Do you have it for the record? Why do I not ask my programs man to reel off what we have in that.

Captain THOMPSON. Senator, in the $12.6 million there is $7 million in the AC&I appropriation to add equipment to the existing two strike teams.

Senator LAUTENBERG. What kind of equipment are we talking about?

Captain THOMPSON. It would be booms——

Senator LAUTENBERG. Not vessels?

Captain THOMPSON. Not vessels, no, sir.

Senator LAUTENBERG. You surely do not get a lot of vessels for that.

Captain THOMPSON. No, sir.

And then there is $4.83 million in the Operating Expenses appropriation and $750,000 in the Research and Development appropriation. That is for a number of itemized things that we could provide you for the record, mostly personnel.

[The information follows:]

The Marine Environmental Protection Initiative consists of the following five components:

	Positions		Fiscal year 1991 request
	Military	Civilian	
Pollution fund staff		7	$264,000
Contingency planning and preparedness			1,320,000
Licensing and document renewal		43	1,868,000
Pollution prevention enforcement [MARPOL]			1,380,000
Vessel traffic services [VTS] reopen/expansion			590,000
Total		50	5,422,000

INDUSTRY'S OILSPILL RESOURCES

Senator LAUTENBERG. Is any of this material available through industry? Are they going to be stockpiling similar types of material?

Admiral YOST. Let me answer that. I have met with industry at the oilspill conference, the OTC, Offshore Technology Conference, in Dallas last week, and met with many of the chairmen and vice chairmen and presidents of the leading oil companies.

PIRO as they call it, Petroleum Institute Response Organization, they are talking in terms of some 500 million dollars' worth of equipment for that organization. They have not funded it. They are waiting and watching very closely the oilspill legislation.

They at least say they are concerned about the liability provisions in that legislation, whether they would be provided liability protection if they in fact put up a response organization. So, though they are talking about seven response teams, 500 million dollars' worth of equipment, they have not funded that yet.

STRIKE TEAM RESPONSES

Senator LAUTENBERG. Admiral, is there any other region or area where strike team employment has been so regular as in the area that we have been discussing?

Admiral YOST. We have had eight responses in the New York-New Jersey area in this past year. That is more than any other area. For instance, in Delaware one response, Rhode Island one response, Mississippi four responses, North Carolina one response, the Caribbean one response, Louisiana three responses, Great Lakes one response, Florida Keys two responses, and Morocco one response, for a total of something like 23 responses, 8 of which, which if my arithmetic is right, is something like one-third, have been up in the New York-New Jersey area.

So I think when we spot response teams, if we get new response teams, we certainly have to look at that area.

Senator LAUTENBERG. I want to ask you, is there anybody from Morocco sitting on this subcommittee? [Laughter.]

Admiral YOST. The gentleman that just came in may. I am not sure.

We sent one man to Morocco to advise the King.

Senator LAUTENBERG. We want to stop it wherever it happens, and you do not have to be a member of this committee to get a quick response, that is for sure.

Senator D'AMATO. But it helps.

Senator LAUTENBERG. It expedites, as we say. [Laughter.]

I am joined here by my colleague across the river, who has as active an interest in the Coast Guard as anybody in this body, obviously, because New York has the same precious coastline, also because of the volume of activity that takes place in the New York Harbor.

Senator D'Amato, we have been talking about the number of incidents that occur in that narrow waterway, the Kill Van Kull, the Arthur Kill, and the area surrounding the harbor or included in the harbor of New York. So we are pleased to see you here this morning and invite you to make any statements or questions.

PREPARED STATEMENT

Senator D'AMATO. Thank you, Mr. Chairman. In the interest of time I am going to ask that my prepared statement welcoming the Admiral, of course, be submitted in the record in its entirety, and several questions that you have alluded to in regard to the GAO report.

[The statement follows:]

STATEMENT OF SENATOR D'AMATO

Mr. Chairman, I join you in welcoming Admiral Yost in his last appearance before us as Commandant of the U.S. Coast Guard. It has been a privilege to work with Paul Yost, and I can only say that he has been an outstanding leader. He has fought for the Coast Guard funding, has worked tirelessly to aid in the cleanup of Prince William Sound, and he has made drug interdiction a top priority.

This year, the Administration is requesting a total of $3.393 billion in transportation funds. It does not anticipate the transfer of any defense funds (last year Coast Guard received $650 million from DOD).

Operating Expenses are requested at a level of $2.4 billion, an increase of $481 million (+25 percent). If we subtract the $300 million provided by DOD for Coast Guard operations during fiscal year 1990, then the increase would be $181 million. Funds are requested for two extra oilspill strike teams. No funds are requested to implement the major oilspill legislation now in conference.

Acquisition, Construction, and Improvements funds are requested at a level of $420 million. This is a cut of $24 million or 5.4 percent. Additional drug interdiction helicopters for the Bahamas would be funded at $45 million. Fleet renovation and modernization [FRAM] would be funded at $87 million.

Mr. Chairman, I look forward to hearing from Admiral Yost today. We have a tough year ahead of us, but we will work closely with the new Commandant after he is confirmed by the Senate. It's clear that we will be hard pressed to find all the funds we need for Coast Guard and for other transportation modes. Paul, you will be missed, but we wish you smooth sailing in the years ahead.

Thank you, Mr. Chairman.

GAO REPORT ON PREPARATION AND RESPONSE FOR OILSPILLS

Senator D'AMATO. In that report it was said that the captain of the New York Port said: "It is impossible to state that spills of any particular size can be handled." I do not know if you are familiar with that. He said: "It is impossible to state that spills of any particular size can be handled."

Do you agree with the captain of the port's assessment of the plan?

Admiral YOST. Well, I think it was probably taken out of context. I have often thought that if GAO would hire English majors instead of journalism majors, that their reports would be more helpful and less yellow journalism.

Senator D'AMATO. Inflammatory.

Admiral YOST. Inflammatory. Thank you, sir. I could not come up with that word. In any event, I do not know whether there are any English majors left in the world, so maybe they cannot.

I think what the Captain of the Port was trying to say, although I was not familiar with his statement, I think what he was trying to say is that each spill is different, and it is very, very difficult to predict how an oilspill cleanup will go.

Exxon Valdez taught us that. Frankly, the *Presidante Rivera* taught us that, where we had No. 6 oil. We had never seen No. 6 oil that would not float on the surface. This did not float on the surface. It was below the surface. It made for a very, very difficult cleanup.

It was probably an expression of frustration. I think we do a very good job of cleanup around the world, and this Captain of the Port is one of the best we have, Captain North.

INDUSTRY'S COOPERATION FOR OILSPILLS

Senator D'AMATO. Let me ask you, how cooperative has the industry been in your efforts in containing pollution?

Admiral YOST. I think in the New York area, you and I certainly have industry's attention. They are very, very concerned, and are very, very cooperative. They immediately work to get the thing cleaned up. So that has not been a problem.

The problem is we just keep getting spills. As I said, we had one this morning. At 3 o'clock this morning industry put 5,000 gallons of gasoline into the Arthur Kill, and we are busily cleaning that up. Most of it is evaporated and gone at this point.

But again, we are focused on that area. Everybody is focused on that area. Everybody is uptight, and this morning at 3 o'clock we get another 5,000 gallons.

OILSPILL TRENDS

Senator D'AMATO. Let me ask you this, Admiral. Is it your sense that there are more spills taking place within, let us say, the past decade or past 3 or 5 years, the same or less, or is it a question that we have just become much more cognizant in terms of identifying, reporting?

Give this committee, if you can, an assessment as to whether or not the situation is worse today, deteriorating today, or are we doing better?

Admiral YOST. We have about 8,000 spills, 7,000 to 8,000 spills a year, and that does not change very much. What has happened this year, if I were a resident of New York, I would say there has been a major increase here, and there has. We have had eight major spills in the New York-New Jersey area this year. That is a major step function.

The rest of the world has been fairly steady. But if I were an inhabitant of Alaska, I would say, my gosh, this thing is accelerating; we had the *Exxon Valdez*. So there have been some big spills. There has been a lot of concern, and there has been a lot of awareness.

For instance, when we have a spill now, as I told our chairman, when we have a spill now, it goes right up my chain of command all the way to the top of the administration. They want to know. Up to this year we have never had that kind of an awareness all the way up the chain.

So the newspapers are aware of it, the administration is aware of it, Congress is aware of it, the American people are. No more spills, I do not think, but a lot of awareness.

USE OF HARBOR PILOTS TO PREVENT SPILLS

Senator D'Amato. Let me ask you one final thing. What is being done to monitor and guide ships using harbor pilots or vessels to escort, in order to prevent spills?

Admiral Yost. In New York, let me talk about that.

Let me add to my last question as far as the numbers go, just to give you some numbers. In 1983 we had 10,000 spills; in 1984 we had 10,000 spills; in 1985, 7,000; in 1986, 8,000; in 1987, 6,000; 1988, 6,000; in 1989, almost 8,000.

So you can see it is not escalating. It is level. In fact, we have less spills now than we did 8 or 10 years ago, because we have gotten better control. But the awareness is higher.

Now, in New York, let me talk about what we are doing to guide ships and monitoring ships using the pilots through the New York-New Jersey port system. All ships have to have pilots. We are reestablishing the vessel traffic service. Phase one is going in now, through the efforts of this committee and our chairman.

So we are continuing our efforts in guiding ships through the New York-New Jersey port system.

Senator D'Amato. Admiral Yost, let me simply take this opportunity to commend you for your outstanding career in the Coast Guard. Your performance as Commandant of the U.S. Coast Guard has been absolutely exemplary.

Admiral Yost. Thank you.

PRIORITIES FOR NEXT COMMANDANT

Senator D'Amato. And I certainly want to wish you well. As we await the Senate confirmation of your successor, Admiral Kime, I understand, do you have any words of advice for him?

Admiral Yost. I have told Admiral Kime that there are several things that I have left undone and I leave in his capable hands. This whole business of upgrading for the marine environmental protection is a new mission. If not new, it is certainly upgraded. The legislation that is going through now and being conferenced will provide, I think, to the Coast Guard a step function in the amount of assets that we put into this mission.

I leave to him the business of bettering our equal opportunity, retention, and recruiting of people. I am not satisfied with that. And I leave to him the responsibility of upgrading the housing and health services that we provide to our own people. We need to do a better job there.

So there is plenty to do.

Senator D'AMATO. And of course you told him off the record to certainly be sure that he is responsive to the needs of the chairman and the ranking member and their constituents.

Admiral YOST. If he was not smart enough to know that, he would never have been selected.

Senator D'AMATO. Admiral, it is always a pleasure seeing you.

Admiral YOST. Thank you, sir.

Senator D'AMATO. I thank you for your candor, and I thank the chairman for his giving me the latitude of interrupting and making these observations and putting these questions to you. And I want to take this opportunity to thank the chairman for his vigilance and for his being on top of this situation before it became an issue of national concern.

Senator Lautenberg has been in the forefront fighting to improve the environment, creating huge cost increases for my constituents because they can no longer dump in his ocean—no, strike that from the record. That was tongue in cheek.

Senator LAUTENBERG. We are helping Senator D'Amato because, though he chides me about it, the fact is that he too wants cleaner beaches extending from Coney Island, Far Rockaway, all the way out to Montauk and around the turn and back in the Long Island Sound, and he has made his interests more than adequately known.

The only thing, the only question that really arises between us that causes some difficulty is whether or not the Statue of Liberty should be turned so her backside is to New York instead of to New Jersey.

Senator D'AMATO. First they claim her, then they want her money, and now they want her to give us the backside.

GAO REPORT ON PREPARATION AND RESPONSE TO OILSPILLS

Senator LAUTENBERG. So it is always a pleasure, Senator D'Amato, to have you with us. I wanted to, in your presence before you go on to your next committee, just—we have had kind of a nice going away party here this morning, and I have said about all the good things I wanted to, commending Admiral Yost for his diligent and outstanding service.

I cannot let him pass without reminding the Admiral, since he described the GAO in less than flattering terms, that the GAO agrees with him in terms of the need for resources for the Coast Guard to deal with major spills.

I think GAO does a pretty good job. They are harassed and abused often by members of the Congress. They get in at a moment's notice do some pretty hard work. And though they may disagree, Admiral Yost, I would not think that they are either inflammatory or tabloidish in their criticism.

Earlier, you responded to a question that I had regarding statutory authority. You said that, while you needed some authority to get on with these oilspill responsibilities, the need is mostly resource-oriented. You said that 85 percent of the requirements of the oilspill bill could be taken care of with additional resources.

But the GAO said: "The Coast Guard believes it lacks authority to require private shipowners, operators, others such as industry cooperatives, to have contingency plans for dealing with oilspills by vessels in transit." I think that confirms what you said, perhaps to a larger degree than the remainder of 15 percent.

Do you have a problem with that?

Admiral YOST. No; I do not have a problem with it. I agree in part with the GAO report. What I disagree with is their general theme that the Coast Guard is ill prepared to respond to major spills. We certainly need more equipment.

Senator LAUTENBERG. If you would examine the record, your response when I asked you about the Captains of the Port plans, I think that you said that in some cases they were inadequate for handling major spills. Now, you cited the Huntington Beach, CA, spill as an example of successful response. Had the wind during that spill been blowing toward the shore rather than away from shore, you might not have used that example. You and I both know that in many cases, the response of your units is not what it should be.

Admiral YOST. I agree with that, Senator.

Senator LAUTENBERG. I just wanted to clear the record for Senator D'Amato, so he knew.

Senator D'AMATO. Well, we recognize that overstatement is sometimes an art.

Senator LAUTENBERG. Never. You know what we call him in private? Delicate Al D'Amato.

Admiral YOST. I just know that there are a lot of English majors that need jobs out there, that is all. That is all I was trying to do.

Senator D'AMATO. I would like to thank the chairman.

USER FEES TO OFFSET OILSPILL COSTS

Senator LAUTENBERG. At my insistence, Admiral Yost, a user fee provision was included in the Senate oilspill bill. Owners or operators of tankers and facilities would be charged a fee for review and approval of their pollution response plans and equipment.

This would be a real user fee, which would be set at the cost of the service. The income would be credited to this subcommittee's appropriation to the Coast Guard.

Tell me, what are your views on user fees to offset the costs of this or other new spill activities? Would you agree that these fees ought to be credited to the appropriation for necessary Coast Guard activities?

Admiral YOST. We do not object to this method of funding. We support user fees in principle over a wide range of user types of fees, that we agree with.

We are not concerned so much where we get that funding, as long as the Coast Guard accounts get the funding and that we do not use the Coast Guard accounts to offset the new money we need to bring into this business.

Now, as far as user fees go, we do not want the user fees to be transferred directly into Coast Guard appropriations. We would rather those user fees go into the Treasury and the Coast Guard appropriation be independent of the amount of user fees we collect, because if we have a program that is based on user fees, then that program's effectiveness is going to go up and down as the user fee collection goes up or down.

I have seen this done in some small Third World countries, where their navies or their police department depend on the fines for their funding, and I have seen this in small towns in the United States where the local sheriff's department depends on fines. So, driving through that town can be very dangerous to your pocketbook.

I do not think that is a good way of doing it.

Senator LAUTENBERG. Would you not support the notion that, if you are going to use the system, you ought to pay for it?

I think it is a fairly appropriate process for developing revenues for services rendered. I do not have a lot of problem with it. I think some of the search and rescue operations, which we have discussed in the past, if someone is neglectful out there—if you get a flat tire on a highway, whether it is a Federal highway or a State highway, and you continue to ride the flat until the wheel is bent, no one ever expects the highway department to pay for a new wheel.

If you go out there and you lack the fuel or lack the experience or lack the equipment to provide safety, we ought not to be mother henning all of these people. Yes; when the seas and nature take over, it is quite a different problem.

Admiral YOST. I agree with you, Mr. Chairman. User fees are something that I warmly support and so does the administration.

We do not get as much support within our authorization committees in the House or the Senate as we do among our appropriators. So I think if it is ever to be done, it is going to have to be through the Appropriations Committee and not the authorizers.

FLOATABLES POLLUTION

Senator LAUTENBERG. Well, as a matter of fact my proposal is that, if we get the estimated $30 million in fees, the scoring would be such that only $15 million of it would be directly deposited or attributed to the appropriations account and the Treasury gets the remaining portion. So that we kind of level off the peaks and valleys.

You and I have discussed many things over the years. One of them is the prevalence of floating trash washing ashore in New Jersey. In last year's appropriations bill I earmarked $1 million for improved air and water surveillance to control these problems. What can you tell me about progress on this initiative?

Admiral YOST. I think that that seed money that you put in in last year's appropriation has brought forth big dividends. We have an interagency organization up in the New Jersey-New York harbor complex with the Corps of Engineers, U.S. Coast Guard, the New Jersey Department of Environmental Protection, New York State Department of Environmental Conservation, and the New York City Sanitation Department.

Last year that group picked up over 600 tons of floating debris. And you remember well, Senator, when you and I overflew the area and looked at some of the sources of that debris. And some of those sources have now been attacked and approached, so that those junkyards and old ships and old wooden hulls that were rotting and breaking off and floating out, some of those have been removed.

So we have identified many of those sources. We expect to reduce the levels of floatables from those sources ashore. We have had almost no beaches closed in this last year. And I think it is an example of good government.

It is an example also of an added mission that the Coast Guard took on, where you earmarked $1 million from slippages in that funding year. Of course, there was not any recurring funding there. It is a mission we have. We are taking it out of hide. It is very effective. We are going to continue to do it, and I want to thank you for the initial $1 million.

Senator LAUTENBERG. We were going to add a couple of small boats to the captain's fleet there for enhanced harbor patrol.

Admiral YOST. Yes.

Senator LAUTENBERG. When I last checked, the boats had not been allocated to the port. Has that now changed?

Admiral YOST. I know that is now under way. We are buying two nonstandard boats to replace the old 32-footers that are doing that job, and they will be—I do not know. I better provide for the record when they will be available and operating.

[The information follows:]

The Coast Guard Captain of the Port, New York, working with the Commander, First Coast Guard District staff and our Maintenance and Logistics Command in New York, has completed the initial contract proposals which establish the required boat specifications and operating criteria. We are looking to procure larger boats than the 32-footers, which will provide greater open water capability and range. We anticipate that a contract for the two boats will be awarded by the end of August this year, with boat delivery to New York in November or December. Although these new boats will not be available for this summer season, the existing boats in New York will continue to support our pollution prevention efforts until they are replaced and phased out of operation.

NEW YORK VESSEL TRAFFIC SERVICE

Senator LAUTENBERG. Another favorite subject of ours is VTS. Last year I provided, in 1989 to be precise, $5.6 million to reestablish the first phase of the VTS operation in New York. It was thought adequate to cover primarily the Kills area and the Port of Newark.

I understand, while the VTS will be partially operable this September, full operations are not likely to begin until closer to December. Now, the question is how reliable is that date? Because, as we discussed earlier, if they start the dredging of the Arthur Kill we are going to be reducing channel width and, given the heavy volume of traffic there, we could be facing a potential disaster if we do not have adequate traffic control.

So first, what about the target date? And second, can you assure me that whenever that dredging operation starts by the Army Corps, that the VTS as we plan it will be fully operational?

Admiral YOST. We had a very high risk strategy in getting that open by August 1990. We failed to do it. We had slippages and delays of equipment. We had slippages in being able to hire trained civilians in New York. Our wages were just not competitive.

We now fell back to using Coast Guard enlisted personnel, radarmen and quartermasters. We had to do some reshuffling due to rating shortages in those rates. In any event, it will not be ready until December, but that is a firm date. I am confident in the December date. I cannot do it by August.

Now, I think that for the Arthur Kill dredging operation, we will have two radar systems in place with the system opened covering that area by the time the dredging project starts. We will impose a one-way traffic scheme, and we will try to minimize the inconvenience to commerce. But we will have it covered.

Senator LAUTENBERG. I did not notice any funding request in your fiscal year 1991 budget for phase II of the VTS system. I think it is fair to say that we share a belief that this is critical to ensuring the safety of the port area.

Why have you not requested funding for phase II?

Admiral YOST. The request for funds, although considered by the administration in this budget, the decision was made to wait until the entire port needs study was completed until any VTS would be further funded. Now, we know we need phase II. We know how much money we need to do phase II.

Senator LAUTENBERG. How much do we need for phase II?

Admiral YOST. $6.9 million to do phase II, and I think you can be assured that it will be in a future budget.

Senator LAUTENBERG. Well, would not 1991 be the perfect year for getting that financing arranged?

Admiral YOST. Well, it is money that we did not ask for in 1991. If it were in 1991, I think it could be used, yes.

Senator LAUTENBERG. Well, we do not want to force feed money on the Coast Guard or anybody else. But what is the timetable for phase II?

Admiral YOST. Phase II, it can be done in 1991. There is not money in the 1991 budget to do it. There were other priorities as the administration looked over this budget and that fell out and is going to wait for the port needs study. So yes, it could be used in 1991. It is not in 1991. We will have it in a follow-on budget.

EXXON VALDEZ OILSPILL CLEANUP

Senator LAUTENBERG. You and I both viewed the situation in Valdez. We missed each other by a day the first time that I went up there. The second time I went up there, Admiral Kime and others of the senior staff of the Coast Guard were there. They were very cooperative.

Could you provide just a quick summary: How have we done up there? Have you completed your review of Exxon's plans? Are they adequate? Have you formally approved the plans? When do you think Exxon and the Federal Government would have finished their cleanup and restoration efforts, and what problems could we face that would cause further delays or a missing of the target to finally get wrapped up there? Will it ever be fully wrapped up?

Admiral YOST. Well, I think that a good job was done last summer. It took a while to get it started, but the mobilization and the money Exxon spent was astronomical up there. The results were not quite as good as the effort, just because it is a very difficult place to work. But the results were good.

After last summer the majority of beaches that had a heavy impact were in fact treated and much improved. Over the winter, Mother Nature proved to be just as effective as man, and over the winter those beaches further improved, some of them significantly.

We have gotten back now, at the beginning of this summer. Exxon has submitted a generic plan before we knew exactly what we had on the beaches. There was still 6 feet of snow on some of those shorelines. We could not get on them to tell what we had. So they submitted a generic plan.

I approved that generic plan. The generic plan now awaits the surveys that are being done and have been completed within the last week or so. Those surveys, a team comprised of the State, the Coast Guard, and Exxon, with a couple of other folks, walked every inch of those affected beaches.

The results were that winter storm and natural cleaning had reduced the oil by 50 to 80 percent, the subsurface oil by 70 to 80 percent. Of the 736 miles that we walked, the surveys found 480 miles with no oil at all, 168 miles lightly oiled, 75 miles moderately oiled, and only 13 miles heavily oiled. The subsurface oil below 4 inches was only on 16 miles.

It was a major improvement. It is an improvement to the extent that I am confident that we are not going to have to use any intrusive methods, like high-pressure hot water, steam, those kind of things that tend to kill things in the environment.

Exxon is going to be able to go in there with primarily mechanical pickup of oil and oil tarballs and mat. They are going to be able to go in there with some bioremediation, microbes that tend to eat the oil. And by the end of the summer, we are going to have a very, very good result. By a good result I mean there will be no beaches that will adversely affect wildlife; there will be no shoreline in recreational areas used by man that will be desecrated to the point that the use will be impossible or even greatly degraded.

So I am pleased with what I see now, and I am confident that by the end of the summer we will have a situation that will be much improved and we can live with.

Senator LAUTENBERG. Is it fair to say that some evaluation of the effectiveness of the response is going to take some time and we will not know about the vibrancy of the spawning season for the salmon, that takes a minimum 2 years typically? I understand the herring season was pretty good up there.

Admiral YOST. The herring season was apparently no problem at all. The salmon, as I understand, Senator, are on about a 7-year cycle. It is my view—and I am not a biologist—it is my view, however, that the salmon spawn, the escape of the fingerlings, last year was unaffected by the spill.

If that is true, 7 years from now when those salmon return there will be a big return. So although some of the fishermen and the State of Alaska are playing a wait-and-see game, I do not think there is any evidence to indicate that we can expect a major fisheries problem this year or in future years.

FLOATABLES POLLUTION

Senator LAUTENBERG. I hope you are right. I visited that area one time on company business and I went up there right after the spill. I was so attracted to the area because of the magnificence of nature that I went up there on my own to visit and fish. It was quite an experience. It would be tragic if the spill caused any permanent damage.

If we could trot all America through that sound, we would probably ruin it. But if we could, I can tell you this, the public resistance to desecration of the environment would be at an even higher level.

We are about to begin a new beach season in New Jersey, I do not have to remind you that our past experience with various invasive materials—sewage, plastic, and medical waste—had a devastating impact on our beach communities and tourism revenue. We now find ourselves in a situation that just a minor negative comment in the press can harm substantially the beach season and many persons' livelihoods.

You did say, and you were correct, that we had a very good year last year, and we hope that that is going to continue.

I understand that the Coast Guard and other Federal and State agencies in the New York-New Jersey area developed an action plan for addressing floatable debris in the New York-New Jersey shore for the 1990 summer season.

I think you indicated, too, and it has been well publicized, that the State of New York has just clamped down very hard on the use of the Fresh Kills landfill site. The 500-foot mountain is going to be one of the highest land points in the area, unfortunately, but it has to be dealt with very, very carefully.

What I have read tells me that the Governor of New York, Mario Cuomo, and the New York Legislature is really serious about this thing, and they are demanding that they clean it up. We are, however, not satisfied that that is going to relieve the floatable debris problem, so we will keep a watchful eye since we in the New Jersey area are the recipients of the mistakes that are made, the material that escapes.

I just wanted to ask what the Coast Guard role is going to be this year as part of the action plan for dealing with these floatables. What preparations are being made in anticipation of the summer? Do you intend to increase surveillance by boats or plane?

Admiral YOST. We are going to continue our surveillance for floatables and, as you said, we are using aircraft as well as boats to do it. We have a patrol out every day in each part of the area. Those patrols, both air and on the surface, report floatables to the Corps of Engineers and to other people who will pick them up.

Last year, as I said, we picked up some 600 tons of debris. And since that time we have gotten to many of the sources, so we hope there will not be as many, as much debris this year as there was last year.

Another thing that impacts on this, Senator, worldwide is the new protocols or the new treaties that we have on plastics, and those MARPOL conventions, as they are called, will be enforced, and the beaches will be kept clear of trash and waste products.

The way we are doing it is enforcing against ships that are at sea. Our people are now boarding ships when they come into New York and other harbors and ask them, where is your trash? We do not see much trash.

The crew sometimes say: Oh, well, we dumped that at sea. And we say: Where did you dump it? And then we issue a citation.

Last year we issued 44 citations, primarily to major vessels, major seagoing vessels.

MARPOL ENFORCEMENT

Senator LAUTENBERG. Any of those come in Boston or in my area?

Admiral YOST. Yes; they do. The majority of the citations involved plastic discharges.

Senator LAUTENBERG. We had one out of Boston, Admiral, and none out of the New York/New Jersey region. Every MARPOL annex V violation but one has come out of the 7th and 8th Coast Guard Districts. There has been one violation cited by your office in Boston, none in my area or in the entire Western United States.

It would appear that only two of the districts are taking this seriously.

Admiral YOST. Well, that is something I should have known and did not, and I will take immediate action upon leaving here to see that it happens.

Senator LAUTENBERG. If you would get back to us on this, I would appreciate it.

Admiral YOST. I will get back to you on it.

[The information follows:]

Although all the 44 cases of MARPOL annex V violations you've referred to were in the Seventh and Eighth Coast Guard Districts, I can say emphatically that we have a nationwide enforcement program and effort. These 44 cases are only those which have involved foreign vessels which need to be reported to flag States as required by the -MARPOL 1973-78 treaty. A review of all violations of Annex V, including those under U.S. jurisdiction, will be conducted as part of the annual enforcement report to IMO this summer.

Coast Guard MARPOL annex V enforcement efforts and results are influenced by many factors which reflect individual port characteristics. In our experience, the tank and freight vessels which visit Gulf ports in the Seventh and Eighth Coast Guard Districts are more likely to trade with countries that do not yet have an active annex V enforcement program; these international regulations have been implemented within the last year and annex V signatory countries are still developing the enforcement programs in their own ports.

In New York Harbor, the MARPOL annex V enforcement efforts of the local Coast Guard teams have been no less zealous than the teams in the Gulf of Mexico ports. A majority of the vessels calling at New York Harbor are on the North Atlantic trade route to and from European ports which also have aggressive enforcement programs. As a result, we have found that crews on these vessels are more aware of, and educated in, the MARPOL 1973-78 regulations. In turn, they are more likely to operate their vessels in compliance.

FLAG STATE JURISDICTION

Admiral YOST. I would say as well, this is a flag State regime. That is, the flag State enforces. And as you know, only 4 percent of our cargo is now carried in U.S.-flag vessels. Of the 44 violations we issued, only four of them were under U.S. jurisdiction. The rest of them were under flag State jurisdiction.

We do not always know what action the flag State took. The four cases under U.S. jurisdiction, the fines have ranged from $1,500 to $9,000. And I will take a round turn on the districts on the east coast particularly.

Senator **Lautenberg**. OK, I appreciate that.

Your budget for 1991 includes $1.4 million for pollution prevention enforcement under MARPOL, the treaty, the Shore Protection Act, and the Ocean Dumping Ban Act. How will the additional $1.4 million in your request be utilized to ensure that this legislation and obligations are enforced and monitored properly?

Admiral **Yost**. It is a fairly small program. I guess we have $2.4 million in nonrecurring provided in the 1990 budget. That was earmarked as follows by your Appropriations Committee: Shore Protection Act, $1 million; ocean dumping, $400,000; floatables in New York Harbor, $1 million.

But in any event, ~~we will~~ buy the two additional small boats we talked about. We will use aircraft hours. We have a 190-aircraft-hour level now and a 1,200-vessel-hour and 3,200 man-hours assigned to that responsibility.

The $1.4 million contained in the 1991 budget is part of what we put in for our oilspill wedge.

Senator **Lautenberg**. It is part of the $12 million?

Admiral **Yost**. Yes, yes.

DRUG INTERDICTION

Senator **Lautenberg**. This committee has been instrumental in boosting the Coast Guard's budget for drug interdiction, and I wanted to ask you a question about the effectiveness of the interdiction strategy. Between 1984 and 1989 funding for the Coast Guard's drug interdiction efforts increased substantially. Yet in the same period the number of interdiction cases declined by 50 percent, the number of Coast Guard arrests declined by 69 percent. The number of vessel seizures has remained fairly constant.

What are the factors that contribute to this steep decline in interdiction cases and seizures?

Admiral **Yost**. I called a meeting yesterday as the lead agency for the maritime interdiction situation. I asked to attend that meeting representatives of the Joint Chiefs of Staff, the commander of the Atlantic Area Coast Guard, JTF-4, a JCS command in Key West, FL, and the commander of the Atlantic Fleet representatives.

The meeting was secret, but I will share as much of it as I can with you. We have had in the Caribbean a major, major impact on marijuana. We are seeing almost no marijuana coming now across the center of the Caribbean. We have basically decimated and more than decimated the marijuana traffic into this country.

Our seizures are way down and that is where our seizures used to come from. Four years ago we had 200 vessel seizures. This year so far we have 10.

What that means is marijuana is not being transported across the Caribbean any longer. I saw in the New York Times 2 days ago a figure, and I cannot verify it, that marijuana has now surpassed tobacco as the leading cash crop in North Carolina.

We have marijuana being grown in every State in the country—California, Oregon, and there is not a State where there is not some marijuana grown. Probably 30 to 50 percent of all the consumption of marijuana is now domestic.

Let me turn to cocaine. We have seized more cocaine this year than we have ever seized before. We have seized almost twice as much so far this year as we seized the year before, and the year before was two or three times what we had seized the year before that.

So in cocaine, we still see cocaine moving, but we do not see as much marijuana moving. That means we have been tremendously successful. The fact that we are not seizing vessels full of marijuana means we have shut down that trade. The fact that we are still seizing cocaine means that we are beginning to shut down that trade, and we see cocaine now not moving in the maritime area, but moving over the land bridge into Mexico, flowing into Mexico and then trucked into the United States across the land bridge.

One might say you have won the problem, so let us remove the forces. And I would say, when you take territory you better leave a man with a bayonet on the territory or you will not control the territory very long. If we were to remove our patrols out of the Caribbean, we would see marijuana begin to move again. And if we remove our patrols out of the Caribbean, we are not going to get the seizures in cocaine and the disruption that we are now getting.

So it is a matter that the amount of seizures and the amount of tonnage sometimes is not a good measure of how well you are doing. Stay the course. What we are doing is just right, and we are making an impression on the drug smugglers.

Senator LAUTENBERG. How do we verify the fact that that reduction in cases and seizures is not a reflection of a reduction in our effort or the skill in our management? That is a fair question to be raised, don't you think?

Admiral YOST. The intelligence network that we have against the drug traffickers is impressive and getting more impressive. The Department of Defense coming into this game has been very helpful in that regard.

I think I can say to you without getting into the classified end of it that we find we are in fact hurting the drug smugglers and hurting them very badly, not only in what we are doing but in what President Barco is doing in Colombia and what some of the other people are doing in some of the South American countries.

The Andean initiative is absolutely critical. That is one of the President's top priorities. So I think we are on track, and we ought to stay where we are.

DOD AND COAST GUARD DRUG INTERDICTION EFFORTS

Senator LAUTENBERG. If you saw me smile when you said that more marijuana is being grown in North Carolina than tobacco, it was not because I approved of it. But since I am considered tobacco's No. 1 enemy, and I suggested that they grow other crops, like soybeans perhaps and sugar beets, I guess they went further than I planned. I certainly did not recommend that other stuff. But it is an unfortunate thing. I am sure Senator Helms would be interested in that.

I wanted to ask about the Navy involvement. Your chief law enforcement defense operations person, Admiral Leland, recently pointed out to the press that the Navy is expected to increase its ship-hours for drug interdiction by 50 percent, flight-hours for drug interdiction by 400 percent this year, provide approximately 60,000 hours of ship time, 40,000 hours of aircraft time for the program.

How do these figures compare with the Coast Guard's time commitments to the interdiction mission?

Admiral YOST. During many periods of time in the deep Caribbean, the Navy has more ship-days and more aircraft-hours in that mission than we now have. I think that that may be a fallout of the threat analysis worldwide and some other things.

As the lead agency in the maritime interdiction, we welcome this support from the Department of Defense. It is working well. It is in a support mode. Those monitoring and detection efforts that the Navy is doing are in consonance with the overall strategy for the Caribbean.

So it is working very well and it is putting a real crimp in the drug smugglers' operations, and I think they are somewhat in disarray.

Senator LAUTENBERG. Disarray because of the lack of coordination? Don't we know who is in charge?

Admiral YOST. Well, we know who is in charge. The President——

Senator LAUTENBERG. I know the chart says so. But how about the functioning?

Admiral YOST. The way it is functioning. The meeting yesterday addressed this issue of how we coordinate this massive DOD effort that is suddenly available and the number of ship-days and assets going in—how we coordinate that to be sure that the Coast Guard operation which does the apprehension and the seizures and the takedown, which is the cutting edge of what we do, that that is coordinated and they fit together.

COAST GUARD AND NAVY DRUG INTERDICTION FUNDING

Senator LAUTENBERG. Did DOD or OMB evaluate your budget request for drug interdiction in concert with the budget request for the Navy?

Admiral YOST. Well, our budget goes first to the drug czar. The drug czar gets the budgets of all agencies as they pertain to drug interdiction before they go to OMB. They then go to OMB with the drug czar's recommendations.

So yes, that review is done and leveled out at that level.

Senator LAUTENBERG. Right, because you know what happens, Admiral. The conclusion that one comes to if we are seeing a larger Navy presence, using essentially the same types of equipment, the same type of approach, then we ought to be able to save some money other places.

Now, we can argue who ought to be doing the maritime interdiction mission. I think your people do a good job understanding what the problem is and pursuing the offenders. But I have no reason to believe that the Navy cannot do it effectively.

At some point there has to be a balancing of funding. I mean, we just cannot keep throwing more people in there and saying that the Coast Guard's budget ought to increase at the same pace as the Navy's.

Admiral YOST. Well, it should not and the President has made it quite clear in this budget that he is not supporting a major increase in the interdiction efforts. It has pretty well leveled out. The increase, if there is any increase, is in the DOD forces that have now been freed up from other trouble spots in the world to support the Coast Guard in this effort.

So there is no increase in the budget for that.

GROWTH IN COAST GUARD DRUG INTERDICTION MISSION

Senator LAUTENBERG. Admiral Leland was quoted as saying: "The Bush administration's desire to boost DOD's role in the drug war means that the Coast Guard is not likely to grow from its present active duty strength of 38,000."

Do you concur in the view that, first, the need is not there, and second, the likelihood is not there?

Admiral YOST. I think you are going to see some growth in the Coast Guard. You are not going to see it in the drug interdiction mission. The President has said that that is where he wants it, and there is going to be very little growth there.

You are going to see growth in the Coast Guard in the environmental protection mission. You are going to see me being able to pull some facilities now and then out of the drug mission back into fisheries enforcement, which will please Senator Stevens.

Senator LAUTENBERG. It will please me, too.

Admiral YOST. It will please you and Congressman Studds and some others along the New England coast. And we have seen that this year. I have been able to do some of that. But there is going to be a slow growth in our environmental protection mission, I am sure.

LEDET PROGRAM

Senator LAUTENBERG. The Navy vessels on dedicated drug patrols carry law enforcement detached teams [LEDET's] which consist of Coast Guard personnel who actually do the boarding and make the arrests if they are necessary. Does your budget request for 1991 anticipate LEDET's on all vessels doing drug patrol?

Admiral YOST. No; we have enough LEDET's. We are using them selectively on the vessels that we feel we need them on. For instance, if two Navy vessels are running in concert in tight formation, we would have an LEDET on only one of them. If a Navy vessel was transiting an area that was not a high-risk area, we might not have any LEDET's on it at all.

And I might mention that when these Navy vessels sight something and put an LEDET on board, the chain of command goes through the Coast Guard at that point. The Navy vessel effectively changes operational control to a Coast Guard chain of command, so that we can do the law enforcement effort.

COAST GUARD DEFENSE READINESS MISSION

Senator LAUTENBERG. Obviously, the Bush budget for 1991 was developed before these incredible changes that we have seen in the Soviet Union and Eastern Europe. The administration now recognizes that its initial request for DOD can be trimmed in light of the new improved international environment.

Can we also assume that your request for a 12-percent operating expense increase for your defense readiness is no longer fully necessary?

Admiral YOST. No; I do not think that is a good conclusion at all. What has happened in Europe has caused us to either think about or plan to remove forces from Europe and bring them back to the continental United States. That means that in any event, any emergency overseas, you are not going to have the number of forces in place that you have now, which means you are going to be more dependent on the ports of embarkation and more dependent on your loading facilities and your ability to transport troops and equipment very quickly.

The Coast Guard's defense mission is almost totally involved in setting up those ports of embarkation, seeing that the ports are not mined, seeing that the facilities are not sabotaged, and that the merchant ships sail safely without submarine contacts and what have you. That is our job, and that is going to be even more critical as we pull back from Europe, or if we do.

Senator LAUTENBERG. Well, you share responsibility in costs for the maritime defense zones [MDZ] with the Navy. Why has not the Navy cited this increased requirement to the committee? The budget data we get from DOD indicates that Navy funding for the MDZ's has declined for the last 2 years and the Navy is considering requesting even less money for the MDZ's for 1991.

Admiral YOST. I cannot speak for the Navy. I would say, though, were I sitting over their budget I would be very worried about losing capital assets if I had a declining budget. If I had a choice, do I fund the Coast Guard's MDZ responsibilities or do I keep another carrier at sea, that might not be too hard of a decision for me to make if I were wearing Navy blue.

MARITIME DEFENSE ZONE FUNDING

Senator LAUTENBERG. Well, I think that it is fairly obvious that everyone here is searching for ways to fund our budget deficit and at the same time maintain the security of our country. The budget pressures are enormous and you see that the President is being forced into a position where it is likely, at least from what we read in the paper and what I hear in the halls, that he is likely to back off the very firm commitment that he made in 1988, regarding new revenues.

So there are funding pressures in every Department. I think it is fair as we look at the MDZ mission to ask whether the Coast Guard is expected to bear an increasing amount of the cost of the MDZ mission if the Navy is going to ask for less.

Admiral YOST. I think that is a good question. I would say this budget does not reflect a growth in our MDZ money. I do not think it reflects a growth in our military defense budget.

What you see there is $300 million coming out of DOD in our last year's budget. That was in funds or in kind, and that is going to have to be made up somehow in this Department of Transportation budget.

Senator LAUTENBERG. Well, have your folks met with the Navy to assess increased tasks for handling the MDZ's? Is it their intention to reduce or maybe permit your role to become a more active or a broader one? Has there been any discussion? Has there been any indication that they are willing to turn to what you might consider a more efficient way to handle our maritime defense zone and thereby provide any funding for it?

Admiral YOST. As the DOD budget has been squeezed and in the President's consideration now, I understand, of a further squeeze in that budget over the next few years, I think the DOD people are working very hard to find out what they are going to drop out of their budget.

But they certainly have not gotten together with us and talked about MDZ. What we have seen is a lessening of funds flowing into that mission that we jointly share with them. I expect that will continue. But that does not make our responsibilities any less. We are just not spending any more money on it.

Senator LAUTENBERG. We note, Admiral, that there is a request for a 12-percent increase for defense readiness operations in the budget request, and that figure already takes the in-kind dollars from DOD into account.

Admiral YOST. Yes; let me say, the 12 percent that we are talking about is not for MDZ. There is none of that going into MDZ. I am merely saying that we cannot cut anything out of MDZ.

That $12 million, 90 percent of it is for an increase in such things as the pay raises and cost-of-living type of items in the people that we have on board. It relates primarily to built-in changes and some joint Coast Guard-Department of Defense exercises.

Senator LAUTENBERG. A substantial increase and a substantial sum of money, 12 percent.

Admiral YOST. Let me respond in writing in detail on that, because I do not feel comfortable.

Senator LAUTENBERG. Please provide information for the record.

Admiral YOST. Yes.

[The information follows:]

Fiscal year 1991 funding for defense readiness, approximately $9.4 million, represents an increase of about 8 percent over fiscal year 1990 funding, after the latter is adjusted for the impact of support-in-kind from the Department of Defense. Previous estimates given to the Committee failed to properly account for the impact of the fiscal year 1990 funding floors for Marine Environmental Protection, and Enforcement of Laws and Treaties. As a result, the preliminary fiscal year 1990 estimate for defense readiness was lower than it should have been, leading to the erroneous conclusion that fiscal year 1991 funding request reflected an increase of 12 percent.

[CLERK'S NOTE.—After providing the above answer, the Coast Guard provided the following amended answer.]

The Coast Guard program budget algorithm allocates costs to programs based on the percentage usage of Coast Guard facilities by mission area in the last year for which complete data were available. For the fiscal year 1991 budget, program budget allocations were based on fiscal year 1987 percentages. The Defense Readiness percentage in fiscal year 1987 was 5.8 percent of the total Coast Guard budget.

Therefore, for every general purpose incremental increase in the fiscal year 1991 budget (such as COLA, pay raises, GSA rent), there was a 5.8 percent allocation of that increase to Defense Readiness. Of the total number of line items in the fiscal year 1991 OE budget, only two received allocations of Defense Readiness greater than 5.8 percent: 378′ FRAM Recrewing—10.1 percent; and Readiness Exercise Planning—100 percent. The total Defense Readiness increase in OE in fiscal year 1991 is only $9.4 million which is 5.2 percent of the $181 million total increase in OE. Thus, in a budget request in OE that is increasing by 8.2 percent, Defense Readiness is increasing only 5.2 percent—and almost all of the 5.2 percent represents allocation of the 5.8 percent share that Defense Readiness gets of all general purpose line items.

SUBMITTED QUESTIONS

Senator LAUTENBERG. We have covered a lot of ground. I appreciate your thoroughness and your responsiveness. There are lots of questions for which we still need some answers. We will submit those questions in writing, and we will be recessing this subcommittee.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

CONTINGENCY PLANNING AND LOCAL CAPABILITY TO DEAL WITH MAJOR SPILLS

SENATOR LAUTENBERG: The Coast Guard and the National Response Team were required to submit a report to the President on national response planning and port readiness earlier this year. I understand that the report has been submitted to the Secretary. Please provide a summary of this study's findings and recommendations. What new national policies on oil spill preparedness do you foresee growing out of this study?

ANSWER: On January 25, 1990, the National Response Team completed the report on national response planning and port readiness titled "Oil-Spill Contingency Planning: National Status; A Report to the President." The report was provided to Secretary Skinner and EPA Administrator Reilly for their submission to the President. The report is still in the clearance process within the Administration. The Coast Guard will be pleased to provide a summary of the study's findings and new initiatives on oil spill preparedness upon release of the report by the President.

SENATOR LAUTENBERG: In January of this year, GAO submitted their report on "Preparation and Response for Oil Spill Philadelphia and New York Ports." The report substantiated the need for many of the legislative fixes in the pending oil spill legislation. GAO did however recommend actions that can be taken absent the legislation by both industry and the Coast Guard. What new prevention programs, response capability, and contingency planning can we expect to see in these ports this year?

ANSWER: At the time the GAO report was prepared, the Nationwide review of Coast Guard On-Scene Coordinator (OSC) Oil and Hazardous Materials Contingency Plans was not complete. During late 1989 and early 1990 these contingency plans were reviewed and updated incorporating worst case oil spill analyses. The GAO report indicated that more specificity was needed in the Captain of the Port Philadelphia and New York contingency plans; however, we feel that the revised plans contain the level of specificity required and that the plans as currently written are effective documents to serve the On-Scene Coordinator in his role as a spill manager. The types of plans recommended by GAO would better serve a party whose purpose is to remove spills, rather than the agency designated to act as the On-Scene Coordinator. The OSCs will continue to further refine their existing contingency plans, though, to ensure that the plans are effective tools for preparedness for oil spill response.

The OSCs continue to work with local response organizations to better ensure that the necessary response organization is in place and the necessary equipment is available to respond to major oil spills. For example, Marine Safety Office (MSO) Philadelphia increased off hours facility and vessel inspections, arranged for vessel insurers to be represented at the OSC's command post, continues to work with state offices on communication equipment improvements, and established an operations center at the MSO to allow for representation of each involved agency. The Delaware Bay Cooperative, in consultation with the MSO, is also putting substantial monies into new pollution response equipment.

A New Jersey/New York Oil Spill Prevention Conference comprised of representatives from Coast Guard, Environmental Protection Agency, State, and industry, was recently held to discuss means to enhance prevention and response to oil spills. Several action committees were developed from this, and some new, effective prevention and response measures are anticipated in the immediate future.

The New York Vessel Traffic Service (VTS) is also scheduled to reopen in December 1990. The VTS, when open, will assist in vessel traffic control and in turn help prevent vessel casualties.

SENATOR LAUTENBERG: What has the industry done since the Exxon Valdez oil spill to increase their response capability?

ANSWER: As a result of the Exxon Valdez oil spill, an American Petroleum Industry (API) task force analyzed the oil industry's preparedness to respond to catastrophic oil spills. This analysis showed that industry was not prepared to mount an effective response effort in the event of a catastrophic spill. The task force report indicated the need for better response capabilities, contingency planning and exercises.

Since the Exxon Valdez spill, industry has exhibited an improved attitude and awareness toward oil spill response. For example, Alyeska in Prince William Sound has added more equipment to their response inventory including four new response type vessels with response equipment onboard, one skimming vessel, one lightering vessel, and 17,000 feet of additional containment boom. Better personnel training programs and more frequent drills have also helped to improve response capabilities. In a recent drill in California, some of the top level members of Texaco were participants in the drill. This type of participation in drills ensures that industry response teams and their managers maintain their level of preparedness to respond to an actual spill.

API has also announced their intentions to establish the Petroleum Industry Response Organization (PIRO) and has set up an organization (PIRO Implementation, Inc.) to oversee its formation. PIRO would have regional centers located around the coastal areas of the country, with each center equipped with trained personnel and response equipment. Each regional center would be designed to respond to a maximum spill size of 8 million gallons with a network established to bring resources from other centers as a situation dictates.

In addition, funding has been provided through PIRO by API for a five year research and development program that is designed to improve oil spill prevention, response, and mitigation.

SENATOR LAUTENBERG: There have been repeated allegations in the media that the Coast Guard is close to industry. What steps have you taken to assure that your people and policies are not too close, nor give the appearance of being too close, to industry?

ANSWER: As a regulatory authority we are concerned about these allegations and have to be concerned even about the appearance of being too close to industry. Decisions and actions which impact the maritime industry are made in the "sunshine" and are open to public scrutiny and input.

In our actions to regulate the industry the Coast Guard makes maximum use of broadly constituted advisory committees; we encourage participation during all levels of the rulemaking process and have full legal review during that process. Decisions which are made which impact the close knit yet competitive maritime industry, find their way across the waterfront in very rapid fashion. Those decisions are open to the scrutiny of competitors as well as the general public. This in our view is healthy. We should point out that the balancing of conflicting views and development of decisions which are consistent with law and regulation, yet fair to the interests concerned, is one of the greatest challenges of the regulator. In this regard we are confident that our personnel are keenly aware of the special responsibilities that they bear and that they execute their actions in a competent, professional and ethical manner. Ethics, conflict of interest, and the appearance of conflict of interest, are issues which are discussed at all levels within the organization. We feel that the media allegation, albeit unfounded in our view, serves as yet another reminder of the special obligations and responsibility of our personnel.

MARINE ENVIRONMENTAL PROTECTION

SENATOR LAUTENBERG: No one disputes the need for increased resources to combat oil spills. Up to 85% of the provisions of the pending oil spill legislation could be executed under existing authority. Does the $12.6 million "placeholder" for marine environmental protection in your FY 1991 budget request address all resource requirements under existing authority? If not, why hasn't the Coast Guard requested or sought to reprogram resources for this mission, in the past and this year?

ANSWER: A clarification is necessary to differentiate between legislative authority and legislative taskings. In several instances, the Coast Guard has existing authority that is broad enough in scope to allow execution of many of the additional taskings contained in the proposed bill. However, these additional taskings will require new resources to accomplish.

The total oil spill legislation "place holder" contained in our FY 1991 budget request is actually $11.2 million. This includes $264 thousand for Pollution Fund Administration, $1.32 million for Contingency Planning and Preparedness, $1.87 million for Licensing and Document Renewal, $750 thousand for R&D, and $7 million in funding for equipment upgrade and pre-staging in support of the National Strike Teams. The $12.6 million figure includes the MARPOL enforcement initiative, which is not directly related to pending oil spill legislation and would be necessary in any case.

This "placeholder" does not contain all of the resources that would be required to accomplish those taskings in the present version of the bill that are executable under existing authority. The "placeholder" was developed before the bills were written. The Coast Guard's position is that new taskings coming from the oil spill legislation should be supported by new funding.

We are presently working closely with the Office of the Secretary of Transportation and the Joint Conference Committee in identifying the resources that will be required to implement the final version of the bill.

SENATOR LAUTENBERG: Among several important new requirements, the pending oil spill legislation will serve only to strengthen and clarify our national commitment under existing legislative authority. What are the resource requirements of each provision (of both bills)? For which provisions of the pending oil spill legislation (both bills) do you already have existing authority?

ANSWER: The following table delineates existing authority and our best estimates of the resource requirements for each provision of each bill. The table is based on the original versions passed by the House and Senate. (H.1465 and S.686) and will not be accurate in addressing the conferenced provisions which are not yet finalized.

PROVISION	AUTHORITY	HOUSE	SENATE
		(FTP/$000)	
LIABILITY			
Fund Admin.	No	65/$6050	65/$6050
PREVENTION			
Mariners Licensing	No	40/$3730	40/$3730
Foreign Flag Manning	No	1/$60	
VTS Study	Yes	4/$560	4/$560
Gauging Thickness	Yes	*	*
Overfill Devices	Yes	9/$750	
Tanker Nav Safety	Partial	4/$1630	
Electronic Reporting	No		0/$300
Tanker Manning	Yes	0/$300	
Double Hulls/Bottoms	Yes	36/$2010	2/$630
Tanker Size Report	Yes		1/$500
FEDERAL RESPONSIBILITY			
Federal Removal Auth.	Partial		95/$4900
Regulations	Yes	2/$640	2/$640
Local Cont. Plans	Yes	52/$3260	52/$3260
Vessel/Facility Plans	Yes	67/$2275	67/$2275
STRIKE TEAMS			
Strike Teams	Yes	154/$33384	208/$39825
Enhance Existing	Yes	0/$1500	0/$1500
CG Vessel Design	Yes	*	*
Response Inventory	Yes	4/$895	4/$895
ALASKA			
Bligh Reef Light	Yes		0/$500
Valdez VTS	Yes	10/$1140	10/$1140
PWS Equip/Pers	Yes	0/$150	
Valdez Pilotage	No	*	*
User Fee Regs.	No	*	*
Oil Term. Adv. Council	Yes		1/$150
Pres. Task Force	No	1/$150	
MISCELLANEOUS			
User Fee Report	Yes		1/$315
Miss. River Comms	Yes		1/$65
R&D Council	Yes		1/$750
Pilotage Study	Yes		0/$300
RESEARCH AND DEVELOPMENT			
Coast Guard Oil Spill R&D	Yes	4/$4000	4/$4000

NOTE: * The asterisked provisions can be accomplished in conjunction with other Coast Guard missions or from within the present resource base. Blank entries indicate no proposed provision.

SENATOR LAUTENBERG: One of the more expensive and difficult to implement provisions of the legislation may be the strike team requirement. I understand that there is an upper limit on the number of personnel and teams you feel confident that you can effectively train and deploy given the number of large spills expected to occur annually. Certainly this doesn't speak to the New York/New Jersey area. Could you discuss your concerns.

ANSWER: Through 18 years of experience within the National Response System established by the Federal Water Pollution Control Act, it has been determined that the optimal strike team size is 35 persons. This number of individuals allows sufficient personnel resources for strike team involvement on several pollution response cases simultaneously as well as the conduct of training of new team members. Strike team forces are brought on scene by the On-Scene Coordinator (OSC) after he initially assesses the situation. Often overlooked is our effective use of the men and women that are stationed at the local Marine Safety Offices (MSOs) or Captain of the Ports (COTPs). These individuals are fully trained to handle oil pollution response activities, and the initial assessments that lead to the call for a strike team. The MSO or COTP personnel are tasked with ensuring that an effective cleanup is initiated. They monitor cleanup contractors and responsible parties, deploy Coast Guard owned equipment, conduct a thorough investigation of the incident, and perform a myriad of other tasks associated with oil spill response. These individuals are augmented by the strike teams when the capabilities of the local unit are exceeded. There are approximately 80 persons assigned to New York and Philadelphia whose skills are used regularly throughout the region in response to oil pollution incidents. In addition there are hundreds of other Coast Guard personnel assigned to ships and shore stations who have as their primary responsibility other mission areas but who can be employed for pollution response activities. In response to the EXXON VALDEZ incident the Coast Guard maintained a force in Prince William Sound in excess of 300 people from throughout the Coast Guard. Nearly every Marine Safety field unit service provided personnel on a rotating basis. Additional Coast Guard resources employed included 14 vessels and 9 aircraft with their corresponding crews, as well as communications and finance specialists. Conceivably, the entire strength of the Coast Guard could be employed in the various aspects of spill response in the event of a catastrophic incident.

A new initiative will be undertaken soon to provide entry level training to all Coast Guard personnel regarding the Coast Guard's Marine Environmental Protection mission. Awareness level training courses are envisioned for Boot Camp, Officer Candidate School, and the Coast Guard Academy. This awareness training will ensure that all Coast Guard personnel understand the Marine Environmental Protection mission and how they, as Coast Guard men and women, fit into the National Response System.

SENATOR LAUTENBERG: Do you expect the Administration to request funding for the same level of readiness anticipated by the oil spill bills or are you likely to request some smaller level of resources?

ANSWER: We are working closely with the Department of Transportation to identify the resources necessary to implement the final version of the bill, and expect the Administration to support the resource requirements identified.

SENATOR LAUTENBERG: Is the entire $12.6 million "placeholder" for marine environmental protection related to oil spill activities?

ANSWER: Not entirely. $1.4 million of the $12.6 million is associated with pollution prevention enforcement activities related to MARPOL Annex V, the Marine Plastic Pollution Research and Control Act, the Shore Protection Act, or the Ocean Dumping Ban Act. The portion of the $12.6 million "placeholder" related to oil spill activities is approximately $11.2 million. This includes $264 thousand for pollution fund administration, $1.32 million for contingency planning and preparedness, $1.87 million for licensing and document renewal, $750 thousand for oil spill R&D, and the $7 million for existing equipment upgrades and pre-staging in support of national strike teams.

SENATOR LAUTENBERG: What will the $12.6 for marine environmental protection actually buy in terms of enhanced oil spill readiness?

ANSWER: Of the $12.6 million, $7 million will be used for the acquisition of enhanced and pre-staged pollution response equipment for the National Strike Force. Another $1.32 million will fund additional personnel to review and exercise contingency plans. These plans will assist in a rapid, coordinated inter-agency and industry response should a pollution incident occur. Another $750 thousand is targeted for research and development to seek methods for improving our oil spill response capabilities.

The remaining amount is not specifically "oil spill readiness" related, but would provide for measures such as improved merchant mariner licensing, merchant mariner document renewal, and the enhanced enforcement of other maritime pollution responsibilities. Oil spill readiness comprises only a portion (albeit a large portion) of the Coast Guard's marine environmental protection responsibilities. A few of the other responsibilities include the enforcement of international MARPOL agreements, offshore dumping surveillance, plastics pollution surveillance and enforcement, etc.

SENATOR LAUTENBERG: Secretary Skinner informed this subcommittee that there is adequate funding for two new strike teams. Will the $12.6 million actually be sufficient to fund two new strike teams in 1991?

ANSWER: The $12.6 million "oil spill wedge" requested in the Fiscal Year 1991 budget is a multi-appropriation package of marine environmental protection initiatives. Part of the oil spill wedge initiative includes $7 million in the AC&I appropriation to provide the equipment, meet prestaging, maintenance and training to enhance the capabilities of the existing two strike teams and to provide some equipment for a third team. The request does not contain any funding for personnel for new strike teams.

SENATOR LAUTENBERG: In his opening statement at the April 12, 1989 Fiscal Year 1990 Coast Guard appropriations hearings, Admiral Lusk stated "As traditional and new sources of pollution threaten our coastal regions, our responsibilities for protecting the marine environment have become more critical." Please describe in detail programs and activities, including resources committed, the Coast Guard has undertaken in Fiscal Year 1990 and plans to undertake in Fiscal Year 1991 to meet these responsibilities.

ANSWER: The Exxon Valdez oil spill was a disaster, the likes of which had not been seen before in the United States. We recognize that the response to incidents of this magnitude must be improved, not just by the Federal government, but by all levels of government, the petroleum industry, and the public. Realizing this, we are evaluating the potential threats and the resources needed to respond to these threats. But, we have also continued our longstanding programs to protect our marine environment. During

Fiscal Year 1990, besides response to traditional pollutants such as oil and hazardous material, we further implemented regulations and field guidance for response to other pollutants such as medical and infectious waste, plastics and other garbage.

In Fiscal Year 1990, all Coast Guard On-Scene Coordinators conducted complete reviews and updates of their local oil and hazardous substances pollution contingency plans, incorporating worst case oil spill analyses. We are reviewing pollution response criteria established in the 1970's, to see if they are still viable for the needs and resources we have today. We have requested approximately $7,047,000 in AC&I funds for equipment and facility renewal or replacement for our Strike Teams. We have spent $125,000 to help reopen the Oil and Hazardous Materials Simulated Environmental Test Tank facility (this will support much needed oil spill response R&D); several new R&D projects were also started in Fiscal Year 1990, and funds were obligated to jointly fund other R&D efforts. We also participated in several studies such as the 1989 Exxon Valdez cleanup operations debrief (which the Coast Guard chaired) and the National Oceanic and Atmospheric Administration's shoreline cleanup workshop.

During Fiscal Year 1991, we plan to continue our R&D efforts and utilize the increased R&D funding to initiate more projects. We expect to effect some changes based on our Fiscal Year 1990 evaluations. We are also anticipating changes that will come about with the passage of the Comprehensive Oil Legislation.

The Comprehensive Oil Spill Legislation, presently in Conference Committee, contains the requirement for the Coast Guard to provide additional Strike Teams, inspection programs, contingency planning oversight, and the like. If these additional duties are required, it is clear that additional resources beyond those presently budgeted will be necessary. Careful consideration should be given to the proper appropriations necessary to make each of these requirements a reality.

SENATOR LAUTENBERG: Describe programs and formal and informal working relationships with other federal and state environmental and enforcement agencies (in addition to the National Response Team), in the following areas:

- beach pollution and marine floatable
- law enforcement
- coastal zone management
- integrated vessel traffic management
- hazardous materials transportation
- pipeline safety
- disaster response/relief
- surveillance and monitoring
- occupational safety and health
- data collection and analysis
- chronic seepage of water pollutants water front facilities

ANSWER: In beach pollution and marine floatables, the Coast Guard has issued guidance to local Coast Guard Marine Safety Offices. As multi-mission units, Coast Guard vessels, aircraft, small boats, Groups and Stations are always prepared to respond to their marine environmental protection responsibilities.

The Coast Guard works closely with EPA and other agencies through participation in working groups and conferences to coordinate federal pollution prevention programs. We have been working with NOAA's National Marine Fisheries Service personnel and

DOA's Animal Plant Health Inspection Service to coordinate our garbage inspection activities.

During numerous public hearings and educational workshops, Coast Guard representatives have encouraged the states to enact parallel legislation. Some states are drafting such proposals.

The Coast Guard has communicated with the National Association of State Boating Administrations and is seeking their support for states to adopt similar legislation.

In coastal zone management, all Coast Guard activities and development projects taking place within a designated coastal zone must be reviewed for direct effects on that coastal zone. Any activities directly affecting the coastal zone require a consistency determination by the Coast Guard that the activity complies with the state approved program to the maximum extent practicable. Since most Coast Guard activities either originate or take place in the coastal zone, we have a strong interest in the program.

The Act authorized the Secretary of Commerce to administer the program. This responsibility was further delegated to the National Oceanic and Atmospheric Administration's Office of Coastal Zone Management, now the Office of Ocean and Coastal Resources Management (OCRM). The Coast Guard coordinates with OCRM regarding Coastal Zone Management (CZM) regulations and issues. In addition, the Coast Guard maintains formal coordination with the state and local agencies which administer the CZM program. To date, 29 states have approved CZM programs.

On November 18, 1988, the Shore Protection Act of 1988 was passed into law as Title IV of Public Law 100-688. This act requires the Department of Transportation, through the U.S. Coast Guard, to implement a permit program for non-public vessels that engage in the transportation of municipal or commercial waste in coastal waters.

On May 24, 1989, the Coast Guard published an Interim Rule (53 FR 22546) regarding issuance of conditional permits to vessel owner/operators, prior to the July 15, 1989, statutory deadline. The conditional permits allow vessels to continue to operate without interrupting waste removal activities until the Coast Guard promulgates final permitting regulations. The Interim Rule establishes the requirement for the owner or operator of each vessel to apply for a conditional permit and to display a vessel number, and it describes application and vessel number display procedures, as well as the conditions for denying issuance or withdrawing a conditional permit. The Coast Guard plans to promulgate a final rule detailing procedures for application and issuance of regular permits at a later date. The final rule will supersede the current Interim Rule. To date, a total of 250 permits have been issued by the Coast Guard. All vessels identified to date as "garbage barges" operating in the New York-New Jersey Harbor area, as well as those on other East and West Coast locations and in Alaska, have received permits. Other vessels used to haul drilling mud from oil production platforms in the Gulf of Mexico have also been permitted under this Act.

The permit application process currently involves a letter sent from a vessel operator to Coast Guard Headquarters for review and approval or disapproval. The Coast Guard then sends a copy of the approved permit to EPA Regional offices for a compliance review (i.e., determination whether the vessel operator has any history of non-compliance with environmental laws). Permits issued will be in effect for no longer than 18 months, at which time the vessel owner/operator must reapply. These conditional permits may be withdrawn by the Coast Guard, or shall be withdrawn by the Coast Guard, if EPA finds the owner or operator of the vessel has a record or a pattern of serious violations of several environmental laws.

The Coast Guard coordinates with EPA Headquarters and Regional Offices. In addition, informal working relationships are maintained with the marine public, and state and local agencies.

In hazardous materials transportation, the volume of packaged hazardous materials transported by vessel continues to increase, most of it moving in intermodal freight containers. In 1981 approximately 7.5 million containers measured in Twenty Foot Equivalent Units (TEUs) passed through U.S. ports. That number has increased to approximately 13.5 million TEUs in 1988.

In July 1988, DOT's Safety Review Task Force cited containerized shipments of hazardous materials as a significant safety issue. It recommended that the Coast Guard implement a program of container inspections at port areas. The former Secretary of Transportation (Secretary Burnley) directed that work begin immediately to carry out this recommendation.

We are in the process of developing a nationwide container inspection program. Recently, we completed a survey of all U.S. ports which detailed the number of containers that pass through them. This information will be used in developing a national program.

Additionally, in November 1988, a task force inspection program was conducted at the port of Los Angeles/Long Beach which targeted containerized hazardous materials for inspection. Other participants included Customs, DOT's Office of Hazardous Materials Transportation (OHMT), and the Federal Railroad Administration. The task force concept was very successful and will be used as a prototype for a nationwide program. Another activity that the Coast Guard will be participating in this year is a containerized hazardous materials task force program in Seattle, Washington involving Customs and other DOT modal administrations. Lastly, we are continuing to target scrap lead-acid batteries, fireworks, and liquefied natural gas cylinders for inspection.

The Coast Guard Marine Safety Office in Tampa, Florida encountered problems with local Customs field offices regarding Coast Guard authority to inspect containerized hazardous materials at port areas. As a result, Coast Guard and Customs personnel in Washington developed an MOU to clear up jurisdictional problems and provide the basis for a coordinated enforcement effort across both agencies.

The MOU was finalized in January 1989 and is now included in the Marine Safety Manual. It allows Coast Guard units to target import shipments of packaged hazardous materials using Customs' Automated Commercial System (ACS) data base. Guidance regarding container inspection procedures and access to the ACS data base is forthcoming in a Commandant's Instruction.

Also in conjunction with Customs, we are developing a coordinated nationwide program for inspecting hazardous materials in marine portable tanks (MPT) and freight containers.

We also conduct joint inspections, at port areas and Non-vessel operating common carriers (NVOCC), of hazardous materials in marine portable tanks and freight containers with the Office of Hazardous Materials Transportation (OHMT).

Additionally, we participate in nationwide hazardous materials workshops. Through this we provide hazardous materials training to state law enforcement personnel.

We conduct joint operations with the Consumer Products Safety Commission and U.S. Customs targeting specific hazardous materials such as fireworks and scrap lead acid batteries, respectively.

We also conduct joint inspections of marine portable tanks and freight containers with the Federal Railroad Administration and Federal Highway Administration.

With respect to pipeline safety, the Coast Guard is participating in a multi-agency working group with the DOT, Office of Pipeline Safety (OPS), U.S. Army Corps of Engineers, NOAA, Minerals Management Service, and state and local agencies to ensure the safety of pipelines which cross navigable waters. The efforts of the working group have resulted in the initiation of major revisions to pipeline regulations by OPS,the lead agency.

In disaster response and relief, the Coast Guard has both formal and informal agreements with FEMA, DOD and numerous state and local agencies for issues such as search and rescue, flood and natural disaster relief, marine casualty, etc. as well as response to pollution incidents. Most maritime casualty and response situations are listed within the District's Standard Operating Procedures (SOP).

The Marine Protection, Research and Sanctuaries Act (MPRSA) requires CG surveillance and enforcement of EPA permitted sewage sludge and industrial waste dumping. The New York/New Jersey area is the only location where active sewage sludge dumping is permitted in the country. Sewage sludge dumping is conducted at the 100 square mile, EPA designated, deepwater municipal dump site located 120 nautical miles southeast of Ambrose Light, New York, and 115 nautical miles from the New Jersey coastline. Though the sewage sludge originates from sewage municipalities in the First Coast Guard District, the site is actually located within Fifth Coast Guard District waters. Other Coast Guard districts have minimal dumping activity or surveillance.

The Government Accounting Office in a November 1989 Report to Congress criticized the Coast Guard's surveillance efforts of dredge disposal sites in San Francisco Bay as being inadequate. The Coast Guard is waiting for the U.S. Army Corps of Engineers to complete a development plan for managing the Bay area disposal sites before surveillance plans that are now under study can be finalized.

SENATOR LAUTENBERG: For the NJ/NY, NJ shore and Delaware Bay and River areas, describe your future plans in each of the above listed areas including planned Memoranda of Understanding, joint programs/strategies, regulatory projects, policy statements, etc.

ANSWER: The Coast Guard continues as an active member of the multi-agency floatable task force in the New York-New Jersey area. The Captain of the Port (COTP) of New York coordinates both air and surface patrol activities with the other Federal and state agencies involved and conducts surveillance of the build up of floatables and reports the location of debris for recovery by the designated agencies.

An outstanding degree of cooperation exists between federal, state and local task force members. Last year, over 600 tons of floatable debris were recovered through the coordinated efforts of the task force. There were only two minor beach closings due to marine debris in 1989. There had been many more in previous years. Through this combined effort, several sources have been identified as points of origin for this debris.

The Coast Guard is part of the on-going interagency task force developing a long term floatables plan for the New York bight. Through the continuance of our air and surface patrols, we will identify and conduct surveillance of new "choke points" where floatables build up. In the meantime, we intend to purchase two new boats for the Captain of the Port, New York for use in tracking floatables and in port activities in support of ocean dumpling surveillance.

The Coast Guard's activities and any development projects will continue to be consistent with the state Coastal Zone Management (CZM) programs to the maximum extent practicable.

The Coast Guard COTP's in these areas have worked closely with all of the states as well as the Research and Special Programs Administration (RSPA) to ensure the safety of transportation of hazardous materials.

Coast Guard future plans include the following. In November 1988, the Coast Guard formed a task force with Customs, Federal Railroad Transportation and DOT's Office of Hazardous Materials Transportation (OHMT) that targeted import/export shipments of containerized hazardous materials at the port of Los Angeles/Long Beach. The task force operation was very successful, and similar operations are planned at other ports around the country. In addition, the Coast Guard conducted joint inspections of containerized hazardous materials with OHMT at seven port areas during 1988. In January 1989, a Memorandum of Understanding (MOU) was signed between the Coast Guard and Customs that addresses joint inspection activities of containerized hazardous materials.

The MOU will enable the Coast Guard to more effectively target hazardous material shipments and allow a coordinated inspection effort with Customs. The Coast Guard will continue to be proactive by targeting containerized hazardous materials by shipper, manufacturer, commodity, and company record. However, the Coast Guard will not be able to initiate a nationwide program without additional manpower resources.

Coast Guard disaster response and relief in this area closely parallel Coast Guard procedures nationwide. With the additional firefighting capability of the City of New York, an additional close working relationship exists between the two agencies.

To reduce resource demands, the CG designed and implemented (1988) a computer-based electronic Ocean Dumping Surveillance System (ODSS) which monitors the sludge barges operating out of the port of New York. These barges are permitted for sewage sludge dumping by the EPA under the Ocean Dumping Ban Act of 1988 (The Act), which amended the Marine Protection, Research, and Sanctuaries Act of 1972 (MPRSA). Barges must be equipped with the ODSS as a condition of their permit. The Act requires the cessation of all sewage sludge dumping by December 1991. As of August 1989, EPA ocean dumping permit fees have been assessed based on the number of tons of sludge dumped.

All EPA-permitted sludge barges are equipped with ODSS units. The Coast Guard funded the cost of ODSS units to retain control of the system. The approximate cost of each unit was $15K, with barge owners funding the cost of drydock and barge preparation for the installation of units and draft sensors. ODSS has four main components: the electronics package installed on the barges (black box), the base station, the watchstander system, and a communications relay station. The base station computer at COTP New York polls each vessel in its data base, and each barge remote unit updates and records the vessel's position, draft, etc. This ensures that vessels dump within the designated dump site and at the permitted dump rate. When vessels go beyond the communications range of the base station (20 miles), polling of the barge remote units is done via the relay station at Sandy Hook, NJ. After vessels exceed the communications range of the relay station (approx. 60 miles) vessel data are stored in the computer onboard the vessel and automatically relayed when vessels re-enter communications range upon return from the dump site.

In addition, in the New York/New Jersey area, the Coast Guard has received numerous inquiries from individuals regarding the transport of municipal and commercial waste to other countries. The Coast Guard will be working closely with local, state and Federal agencies in an effort to identify those vessels to ensure they are included under the Shore Protection Act permit process.

SENATOR LAUTENBERG: In FY 1991 what plans are there to reallocate cutter, Group and aircraft resources among missions. Please provide a table comparing FY 1989, 90 and 91.

ANSWER: There are no specific plans to reallocate cutters or aircraft among missions in FY 1991. Coast Guard resources are all multi-mission assets, and we will continue to distribute them to accomplish routine statutory mission requirements (i.e., MEP, LE, SAR) and to respond to changes in national priorities or exigencies that arise. The Coast Guard continually seeks the best utilization and distribution of its limited resources in meeting national priorities.

Recent historical resource utilization is shown in the table below.

TOTAL RESOURCE HOUR ALLOCATION FOR CUTTERS AND AIRCRAFT
FY 1987 THROUGH FY 1989

MISSION	FY 87	FY 88	FY 89
CUTTERS	%	%	%
Drug Enforcement	49.4	43.7	44.3
Fisheries Enforcement	10.4	10.2	14.5
General Law Enforcement	4.6	4.8	4.5
Marine Environmental Protection	0.1	0.2	2.9
ATON	27.8	32.8	26.4
SAR	7.7	8.3	7.4
AIRCRAFT			
Drug Enforcement	42.3	40.7	43.1
Fisheries Enforcement	6.1	6.7	9.4
General Law Enforcement	4.5	4.6	5.3
Marine Environmental Protection	2.0	2.1	7.6
ATON	5.3	5.7	4.0
SAR	39.8	40.2	30.6

SENATOR LAUTENBERG: In the past few years much surveillance equipment was procured for your cutters and aircraft. Has any of this been used for pollution surveillance? What is the status of the Coast Guard's AIREYE equipment?

ANSWER: The only surveillance equipment used in the previous several years for pollution detection is the Airborne Remote Instrumentation (AIREYE) system. Research and Development efforts to develop AIREYE began in the mid-70's. Procurement of the system was funded in 1985, and first installed in 1987. AIREYE was originally developed for use in surveillance operations to detect vessels illegally dumping oil. AIREYE comprises three subsystems for surveillance and detection: Active Gated Television (AGTV), Infrared/Ultraviolet line scanners, and Side Looking Airborne Radar (SLAR). Each of these subsystems has exhibited certain strengths and weaknesses for the variety of purposes for which AIREYE has been used. We have learned, for example, that for tracking oil spills, the SLAR is the most effective.

The AIREYE system has been used several times over the past years for reconnaissance purposes in detecting and tracking oil spills. Most recently, AIREYE was used routinely during the EXXON VALDEZ, MEGA BORG, and

AMERICAN TRADER incidents in assisting the Scientific Support Coordinators with spill tracking and trajectory predictions. Coast Guard Air Station Cape Cod (the unit normally used for oil spill reconnaissance) has three systems.

Air Station Miami has one partial AIREYE system for use with the reconnaissance camera only; an AIREYE data management system is installed on an Air Station Elizabeth City, NC, Ice Patrol HC-130H; and, one data management system is on loan to the Army.

Overall, AIREYE equipment is in considerable disrepair and we are considering requesting funding support in future budgets to provide full operational capability. Currently, only one of the three systems in Cape Cod is in an operational status.

SENATOR LAUTENBERG: In the FY 1990 Senate Appropriations hearings (p.329) monies and resources to reduce marine floatable incidents in the NY/NJ area were identified as already available in the general operation expenses of the first Coast Guard District in Boston. How many boat, cutter and aircraft hours were devoted to this mission (or general Marine environmental protection if that data is unavailable) in FY 1988, FY 1989 and how many are planned for in FY 1990.

ANSWER: The following table provides the resource hours expended in the First Coast Guard district in support of Marine Environmental Protection missions.

FIRST DISTRICT	FY88	FY89	est. FY90
Boats	3993	3155	3500
Cutters	2617	1666	2000
Aircraft	586	1543	1500

SENATOR LAUTENBERG: What specific guidance was provided by the First and Fifth Coast Guard Districts in FY 1989 and FY 1990 to District units on marine floatable surveillance, prevention and enforcement? Likewise for FY 1990?

ANSWER: During FY 1989, the First Coast Guard District promulgated a District Instruction which addressed enforcement, surveillance, and response to marine floatables including medical waste. The Fifth Coast Guard District did not issue a special instruction per se, but routed the Coast Guard Headquarters ALDIST on marine floatables and medical waste to all field units for action.

SENATOR LAUTENBERG: Your Fiscal Year 1991 budget includes a Marine Environmental Protection Initiative including $1.38 million for Pollution Prevention Enforcement (MARPOL, Shore Protection Act, Ocean Dumping Ban Act). Describe how and where these monies will be used (i.e., FTE, equipment, increased vessel or aircraft hours?) Compare these increases to the base funding and FTE and other resources.

ANSWER: The request for $1.38 million in our FY 1991 budget will fund additional personnel for our nationwide pollution prevention responsibilities, particularly targeting the enforcement of MARPOL, the Marine Plastic Pollution Research and Control Act, and the Ocean Dumping Ban Act. Additionally, a portion of these funds will be used to promote public education regarding the latest MARPOL annexes. These later annexes now cover an estimated 14 million additional vessels that were previously unaffected. One aspect of this educational effort will attempt to reduce pollution caused by the discharge of garbage from both merchant and recreational vessels.

The additional funding will allow us to supplement the 23 pollution prevention personnel and $743 thousand dollars of recurring funding that was previously provided for MARPOL responsibilities in our FY 1989 budget. The present plan calls for the addition of three personnel at Captain of the Port (COTP) of New York and two additional personnel at COTP of Philadelphia to enhance Coast Guard enforcement and educational efforts under those pollution prevention programs.

SENATOR LAUTENBERG: Is this $1.38 million the extent of resources requested for expanded Coast Guard environmental responsibilities other than those identified in anticipation of oil spill legislation?

ANSWER: An additional area of Coast Guard environmental responsibilities, not included in the above, is the non-indigenous (exotic) species study required by the Coast Guard Authorization Act of 1989. An interim report to Congress has been drafted and will be submitted by the Secretary of Transportation in the near future. Proposed legislation which tasks the Coast Guard with new initiatives could require additional resource requests in subsequent years.

SENATOR LAUTENBERG: Will restoration of the $41 million cut from your FY 1990 budget by the Deficit Reduction Act translate to directives to your operational commanders to reinstitute curtailed Marine Environmental Protection harbor patrols and coastal overflights?

ANSWER: This Administration is committed to the Marine Environmental Protection mission as an important priority. The Coast Guard did not curtail harbor patrols or coastal overflights to compensate for any portion of the $41,750,000 one-time reduction in funds in FY 1990. The Coast Guard was able to forestall operational cuts because: (1) the cuts are non-recurring in nature; (2) the Coast Guard received over $20 million in payments--available for obligation in Operating Expenses in FY 1990--from Exxon as a result of the EXXON VALDEZ response; (3) the Coast Guard was able to purchase some items in FY 1989 that had been scheduled for purchase in FY 1990; and (4) the Coast Guard was able to make a one-time deferral of maintenance in FY 1990.

Restoration of the $41 million will allow the Coast Guard to continue the current level of operations. Conversely, a recurring cut of the $41 million would require programmatic cuts of that amount since the Coast Guard does not have the one-time sources of funds available in FY 1991 that allowed us to defer the operational cuts in FY 1990.

SENATOR LAUTENBERG: Are we correct in assuming that this $1.38 million initiative is part of the $12.6 million "placeholder" for environmental protection you cited in Admiral Yost's opening statement?

ANSWER: Yes, the $1.38 million MARPOL initiative is part of the $12.6 million "placeholder" cited in Admiral Yost's opening statement, but is not directly related to the pending oil spill legislation. This funding is for pollution prevention enforcement related to the Marine Plastics Pollution Research and Control Act which implements Annex V of MARPOL, the Shore Protection Act, and the Ocean Dumping Ban Act.

SENATOR LAUTENBERG: How many resource hours and how much funding is in your base for pollution prevention enforcement under MARPOL, the Shore Protection Act and the Ocean Dumping Ban Act?

ANSWER: Resource hours are not identified in our budget. The expenditure of resource hours is historical in nature, and is based on how particular resources (ships, boats, aircraft, etc.) were utilized to carry out our various missions. The multi-mission character of the employment of most Coast Guard resources requires this flexibility.

In the FY 1989 budget process the Coast Guard received 23 personnel and $743 thousand in recurring funds to support our MARPOL responsibilities. There was no additional funding in FY 1990.

There has been no recurring funding specifically identified in the Coast Guard budget for the Shore Protection Act or the Ocean Dumping Ban Act. Funds to support these activities have been diverted from other Coast Guard operating categories and, to the maximum extent possible, we will accomplish the objectives of several programs simultaneously using the multi-mission concept.

Although the Coast Guard receives money from permit fees under the Ocean Dumping Ban Act, this money will be offset by an equivalent reduction in the Coast Guard base for FY 1991 and subsequent years as shown in item 1c. on page 31 of the budget.

SENATOR LAUTENBERG: From the data provided to this Committee, it appears that every violation cited by the Coast Guard for plastics dumping has been against foreign commercial vessels. Do you believe that all U.S. commercial vessels, fishing boats and recreational boats are complying with the plastics dumping ban? What do you intend to do to step-up your enforcement program? When can we expect to see results?

ANSWER: The data provided was a listing of only those cases which have been forwarded to the flag state for enforcement as per the MARPOL 73/78 Convention. These cases, generally, involve vessels which are from countries signatory to Annex V and whose discharges have occurred outside of 3 nautical miles. Non-signatory vessel cases are forwarded to the flag state for enforcement/information if the discharge occurred outside of 200 nautical miles; otherwise, they would be processed under U.S. jurisdiction.

We are aware that there are cases currently being processed under U.S. jurisdiction, and we are preparing to review the data base over the next few weeks. The first U.S. jurisdiction case has recently been completed with a civil penalty of $12,500 collected. Another pending case involves a U.S. fishing vessel discovered discharging a fishing net off of the New England coast, and has been assessed a civil penalty of $25,000 - the statutory limit.

We are conducting investigations of any alleged violations brought to the attention of the U.S. Coast Guard. The enforcement guidance for our field units was distributed when the interim final regulations were published on April 27, 1989. On May 2, 1990, the regulations requiring waste management plans and placarding were published and will be effective July 31, 1990. At that time, we will enforce these regulations during our port safety boardings and investigate any reports of violations.

With the recreational boating season beginning, there may be more reports of illegal garbage discharge due to more people looking and heightened awareness resulting from media and public interest.

SENATOR LAUTENBERG: The Marine Plastic Research and Control Act of 1987 required you to submit a report to Congress by the end of last year on the implementation of the MARPOL Annex V treaty. Where is the report and what can we anticipate it will say? Will it address the Coast Guard's spotty enforcement program?

ANSWER: Annex V went into effect on December 31, 1988, and interim regulations implementing the Act, which adopted Annex V, went into effect on May 30, 1989. The Act requires the Secretary of Transportation to submit an initial compliance report to Congress by December 31, 1989, and then biennial reports are required for a period of six years. The report has been delayed in part because of the time lag in the contracting process used to develop the initial submission. The Office of the Secretary of Transportation now has proposed drafts of the letters forwarding the report to the Speaker of the House of Representatives and the President of the Senate.

While the report discusses enforcement practices, its primary purpose is to lay the foundation for future reports. The report discusses the problem of marine plastic pollution and the legislative and regulatory requirements developed to address that problem. The report, as required by the Marine Plastic Pollution Research and Control Act of 1987, also covers garbage reception facilities, compliance and effectiveness, and plastic pollution public education programs.

The Coast Guard conducts annual surveys and inspections of waterfront facilities and visits other facilities in the course of routine business. We also routinely inspect vessels calling at U.S. ports. The Coast Guard has made verification of compliance with Annex V a standard part of all these surveys and inspections. The Marine Plastic Pollution Research & Control Act does not require separate inspections for verification of Annex V compliance. The Coast Guard believes that requiring a separate mandatory inspection for Annex V would place an unnecessary burden on the regulated industry and public and an unnecessary administrative burden on the Coast Guard. Reports of inadequate reception facilities or other Annex V violations are promptly investigated by the Coast Guard.

SENATOR LAUTENBERG: The Ocean Dumping Surveillance System is now up and running, though I understand that there is a problem with the accuracy of data transmitted to the Coast Guard by the devices installed on the sewage barges. Has this data problem prohibited your ability to detect illegal dumping?

ANSWER: There is currently a problem with the quantity of ODSS data being transmitted. The quality of the data has been verified correct in all cases. The major problem lies with the fact that ODSS system operation has been required to exceed the initial design criteria. The system was designed to provide data from the 12 mile site. That dumping site has been closed, and the new 106 mile site is being utilized. This change in operational parameters has put a strain on the ODSS. The major problem areas lie in the communications and mechanical draft sensors aboard the sludge barges. The communications problems are being corrected through new antenna arrays and the relocation of antennas aboard the barges. A test is being developed to utilize the Geostar system aboard one barge to determine feasibility. A DOT Inspector General Audit (number 0V3007V000) recommends that, since ocean dumping will cease in 1991, it is not cost effective to install Geostar units on all of the barges.

The draft sensor hardware reliability problem is being solved through the installation of a heavier duty sensor on the barges. The current system readouts are running at approximately 55 to 65 percent of all transits. According to the EPA Report to Congress on ODSS, the system has met the enforcement requirements as a deterrent, since the dumpers do not know whether the system on the barge is fully operational or not. Additionally, the EPA report indicates that even incomplete voyage printouts are useful. The ability to detect illegal or improper dumping is high and the current improvements to the system will increase the deterrent and detection capabilities of the system.

SENATOR LAUTENBERG: Has this system resulted in widespread compliance with the requirement to dump at the designated site?

ANSWER: ODSS, in combination with an EPA requirement to have a third party observer-shiprider on board all vessels at the dump site, has resulted in virtually 100% compliance with the EPA permit requirements.

SENATOR LAUTENBERG: How many violations for illegal dumping have been reported? What has been the disposition of these violations at EPA?

ANSWER: To date, there have been 5 violations of ocean dumping permits reported. Of these, one, in January 1989, was a short dump, i.e., the sewage was discharged faster than the permit allowed, and it occurred over 20 miles outside the dumpsite. The EPA is still investigating this incident. The remaining 4 violations were vessels which strayed outside of the designated dumpsite during the dumping evolution. These also are still under investigation by the EPA. The particulars of these incidents are contained within the EPA Report to Congress on Surveillance and Environment of Sewage-Sludge Dumping.

SENATOR LAUTENBERG: The FY 1989 DOT Appropriations Act required of the Coast Guard that not less than $147 million in operating expenses be available for environmental protection activities. The U.S. Coast Guard document "Budget in Brief" prepared for the FY 1991 budget shows that in FY 1989 only $140.5 million in operating expenses were available for environmental protection activities. Therefore, it appears that the floor in spending for environmental protection activities which was mandated by law, was not met by the Coast Guard by $6.5 million dollars. Please explain why this floor in spending was not met.

ANSWER: The funding profiles for the various Coast Guard missions in the FY 1991 "Budget in Brief" are based on the Coast Guard's Program Budget process. This is a systematic process by which the resources from the Operating Expenses Appropriation are allocated to "Operating" and "Support" programs, based on the percentage of time spent by Coast Guard operating facilities in the performance of their assigned mission(s). Because of the unavoidable time lag in compiling the actual resource utilization records, funding projections by mission for fiscal years 1989-1991 are based on percentages from the FY 1988 program budget and reflect how time was spent in FY 1988. These projections may vary from how time was or will actually be spent in fiscal years 1989-1991. The program budget percentages for a given year can not be calculated until data for that year have been compiled. Until that time, program budget percentages from the last completed year must be used to estimate outyears. We are currently running calculations for the FY 1989 program budget. Until all computations are final, we will not know if Coast Guard met the spending floor for environmental protection activities. We expect that we did meet the spending floor because of the significant effort expended on the Exxon Valdez cleanup.

VTS NEW YORK

SENATOR LAUTENBERG: I understand there has been a problem in finding trained personnel for the New York Vessel Traffic Service (VTS). What has been the problem in getting adequate personnel? To what degree has the staffing problem played a role in the delay of making Vessel Traffic Service (VTS) New York operational?

ANSWER: Due to difficulties in hiring and retaining civilian personnel in New York, Vessel Traffic Service (VTS) New York will be crewed with Coast Guard enlisted personnel. VTS watchstanders require training and experience in navigation, radar operation, and communications. There are many billets in the Coast Guard that require these skills, and there is a shortage of qualified people to fill them. In spite of this shortage, we have been able to identify all the people needed to staff VTS New York. The crew is reporting and their local training is well underway.

Delays in identifying and transferring a person to the Vessel Traffic Service (VTS) postpones the time when they begin local training. A person with the requisite basic skills still requires three to four months of local training to become a fully qualified watchstander. We are striving to have the VTS fully staffed by 1 August with operations beginning 1 December.

SENATOR LAUTENBERG: Have there been problems in soliciting bids from vendors for the hardware involved in this project?

ANSWER: All the hardware we are using in Phase I of the New York Vessel Traffic Service project is available commercially off the shelf. We have had no problems finding vendors.

SENATOR LAUTENBERG: Have bids for Phase I come in at levels expected in initial budgeting?

ANSWER: At our present spending rate, it appears the initial estimates will be within 10 per cent of actual costs.

SENATOR LAUTENBERG: Exactly how will the initial appropriation for Phase I be utilized?

ANSWER: Of the $5.6 million appropriated for Phase I of the New York Vessel Traffic Service, $2.2 million will be used for personnel costs for Fiscal Years 90 and 91. The remaining $3.4 million will be used to purchase, install and integrate electronic components; rehabilitate the vessel traffic center; and provide the new unit initial operating expenses.

SENATOR LAUTENBERG: GAO reported that the Coast Guard is using its Clean Water Act 311(k) fund as a "funnel" for reimbursing federal agencies' clean-up costs related to the Exxon Valdez oil spill. Exxon is contributing to the fund and the Coast Guard is paying the various agencies according to fund rules. As part of these rules, agencies will receive reimbursement for their "incremental" response costs (e.g., supplies, equipment, travel, etc.), while the fund recovers the full cost of the federal response efforts. Is it legal for the Coast Guard to build up the amount of money in the 311(k) pollution fund in this manner? Does building up the fund in this manner usurp or bypass Congress' control of the fund through replenishment from appropriations?

ANSWER: The Coast Guard has handled the Exxon payments consistent with the law. The Coast Guard has billed Exxon for the total cost attributable to the services provided by federal agencies. Billing Exxon for less would have provided Exxon with a windfall economic benefit stemming from its use of the government's resources. Subsection 311(f) of the Federal Water Pollution

Control Act (FWPCA) establishes liability to the United States for the actual costs which the government incurs.

Under the long standing rules in 33 CFR Part 153, Subpart D, which control payments from the FWPCA 311(k) Fund, payments are made to federal agencies (including the Coast Guard's Operating Expenses Appropriation) only for: (1) reasonable costs incurred by government industrial type facilities; (2) actual costs where an agency is required or authorized by law to obtain full reimbursement; and (3) reasonable costs incurred that are not ordinarily funded by an agency's regular appropriations and that are not incurred during normal operations. Those rules reflect the principle that agency appropriations should not be augmented with spending authority which Congress has not provided under the law. In category (3) above, an agency would have its appropriations augmented if it were reimbursed from the fund for costs covered by the agency's regular appropriations. Simply stated, even though such costs were properly billed to Exxon, reimbursing them to the agency would constitute a second payment to the agency for the same costs.

This practice does not usurp Congressional control of the Fund. The Fund was initially established as a "revolving" fund with money received for activities associated with oil spill response being deposited back into the Fund. Congress through the appropriation process retains authority to reprogram Fund monies and has done so several times in the past few years.

SENATOR LAUTENBERG: As stated above, the various agencies using 311(k) monies have been reimbursed for incremental costs and not the full costs of the federal response costs agencies expended on the spill. What is your authority to retain such funds considering such retention probably will affect the intent of the program for which the funds were originally appropriated?

ANSWER: The authority is located in Section 311(k) of the Federal Water Pollution Control Act (FWPCA), which provides in relevant part:

> Any [funds other than appropriations] received by the United States under this section shall also be deposited in [the revolving fund] for such purposes [carrying out the provisions of subsections (c), (d), (i), and (l) of this section]. All sums appropriated to, and deposited in, said fund shall remain available until expended."

The Coast Guard has clear authority to receive and retain in the revolving Fund the funds in question, provided they are not used for costs that are already fully funded by appropriations. It would be an improper augmentation of appropriations if a federal agency retained and spent monies reimbursed for salaries or other costs that are already fully funded by appropriations. If there are any effects on Federal programs, they are the result of performing emergency tasks that, at the President's direction, preëmpted scheduled work within the agencies. This is not a contravention of congressional intent because performance of those tasks is a designated agency function, as noted in section 311(l) of the FWPCA.

Of course, response to a spill changes the specific use for the resources involved. But, that use had to have been an authorized mission for the federal agency responding. As an example, a Coast Guard 378' WHEC in the Gulf of Alaska would normally be involved in fisheries law enforcement. If diverted to respond to a large spill such as the Exxon Valdez spill, the cutter would still be performing an authorized mission but at the "opportunity cost" of not performing fisheries law enforcement.

In most cases, the federal response to oil spills does not make a significant change in the mission mix of the units responding. In the case of Department of Defense units, most spills do not require assets except those like oil skimmers whose primary mission is pollution response. However, for a large spill like Exxon Valdez, federal units may be diverted from their more traditional tasks. Such a major diversion decision would not be made cavalierly. For example, the decision on the extent of DOD involvement in the Exxon Valdez response was made by the President after cabinet level discussion.

Of course, Congress has the prerogative to correct the allocation of resources should a large spill divert units from their other mission areas to an unacceptable extent. In the case of the Exxon Valdez, Congress did just that by directing that reimbursement to the Coast Guard from Exxon be made to the Operating Expenses appropriation rather than to the 311(k) fund. That action allowed the Coast Guard to make funding adjustments to assist units adversely affected by the response to the Exxon Valdez spill.

SENATOR LAUTENBERG: Does the crossover from one fiscal year to another have any effect on agencies' rights to obtain reimbursement of spill-related costs (that is, can funds spent in FY 1989 be reimbursed to agencies in FY 1990 without restrictions)?

ANSWER: Funds obligated by an agency in FY 1989 on the basis of a valid reimbursable agreement can be reimbursed to that agency in subsequent years without restriction.

As to the question of the performing agency's ability to later expend the reimbursed funds, the answer is somewhat more complex. If the performing agency's funding is appropriated on an annual basis, it may expend the funds received--or to be received as reimbursement in a later year--only if it has previously established a receivable for the out-of-pocket costs of the reimbursable work in the year the funds are obligated (in this case, FY 1989). If the performing agency's funding is no-year (e.g., industrial or revolving funds), then the funds reimbursed may be spent without restriction in the current or future years.

WHERE IS THE COAST GUARD PEACE DIVIDEND?

SENATOR LAUTENBERG: When did your personnel last sit with the Navy to assess the required tasking for the maritime defense zones and their intended reduction in MDZ dollars?

ANSWER: The normal forum for us to "sit" with the Navy is the Navy-Coast Guard (NAVGARD) Board. This board was established in 1980 to examine issues of mutual Navy-Coast Guard interest. The NAVGARD Board usually meets biannually.

The last Navy-Coast Guard assessment of all maritime defense zone (MDZ) tasking was the initial Coast Guard Wartime Tasking Study instigated by the NAVGARD Board. The results of this study, approved by the Board in 1981, were used to establish the present MDZ tasking. Discussions and studies since that time have focused on refining the tasking within various warfare arenas. The Chairman, Joint Chiefs of Staff (CJCS), has not published a new Joint Strategic Capabilities Plan (JSCP), so there have been no changes to the supporting plans and the tasking which support those plans. We provide input to the CINC's and the Navy as the Joint Staff prepares the JSCP.

There have been no Navy-Coast Guard discussions of any Navy plans to reduce MDZ dollars.

The next meeting of the NAVGARD Board is scheduled for August 1990.

SENATOR LAUTENBERG:What has been the primary reason for the expansion of the Defense Readiness mission since 1984?

ANSWER:The Coast Guard has always had defense responsibilities as one of the nation's armed forces.

The expansion of activities within the Defense Readiness mission since 1984 is the result of the creation of the maritime defense zones (MDZ's). On March 7, 1984--as a result of a 1981 review of Coast Guard Wartime Tasking--the Secretary of the Department of Transportation, the Secretary of the Navy, the Commandant of the Coast Guard, and the Chief of Naval Operations signed a memorandum of agreement creating the MDZ's. This document formalized the Coast Guard relationship with the Navy during wartime.

The Coast Guard's involvement in MDZ has resulted in a revamping of the Coast Guard readiness planning system to conform with the Joint Operations Planning System (JOPS), and more recently with the Joint Operations Planning and Execution System (JOPES). We have also increased our participation in the Joint Chiefs of Staff (JCS) command post exercises (CPX's) and field training exercises (FTX's).

SENATOR LAUTENBERG: What has been the growth in personnel hours, vessel hours and aircraft hours in support of your defense readiness mission since 1984? Please compare each of these categories with similar changes in all other Coast Guard missions?

ANSWER: The Coast Guard does not account for the expenditure of personnel hours to the various mission categories. Given the multi-mission roles that most of our personnel fulfill during their daily employment, such a system would inevitably be very complex, inefficient, and resource-intensive.

The attached spreadsheet provides vessel and aircraft historical data derived from our abstract of operations reports. The composite employment hours are simply the sum of cutter and aircraft employment hours.

As a percentage of total employment hours, defense readiness expenditures initially increased in 1985, but then remained relatively constant. The initial increase of employment hours corresponds with the establishment of the MDZs in 1984. Note that aircraft employment in defense readiness support is a very small percentage of total employment.

From a funding perspective, in FY85 defense readiness support comprised approximately 5.2% of our total budget, whereas in FY90 it comprised only about 3.9%. As a percentage of operating expenses (OE) alone, defense readiness has remained relatively steady over the last five years, between 5% and 5.5%.

COAST GUARD RESOURCE HOUR STATISTICS
FOR
DEFENSE READINESS VS TOTAL EMPLOYMENT

CUTTER EMPLOYMENT

	1984	1985	1986	1987	1988	1989
TOTAL HOURS	420,942	418,018	364,685	401,360	371,885	440,966
DEFENSE READINESS HOURS	24,475	35,069	31,882	32,639	36,547	36,288
PERCENTAGE OF TOTAL	5.81%	8.39%	8.74%	8.13%	9.83%	8.23%

AIRCRAFT EMPLOYMENT

	1984	1985	1986	1987	1988	1989
TOTAL HOURS	97,651	106,465	102,857	107,537	106,202	122,347
DEFENSE READINESS HOURS	760	958	1,088	1,449	1,490	1,948
PERCENTAGE OF TOTAL	0.78%	0.90%	1.06%	1.35%	1.40%	1.59%

COMPOSITE EMPLOYMENT TOTALS

	1984	1985	1986	1987	1988	1989
TOTAL HOURS	518,593	524,483	467,542	508,897	478,087	563,313
DEFENSE READINESS HOURS	25,235	36,027	32,970	34,088	38,037	38,236
PERCENTAGE OF TOTAL	4.87%	6.87%	7.05%	6.70%	7.96%	6.79%

SENATOR LAUTENBERG: Will the entire $12 million increase requested for defense readiness be used in support of the maritime defense zones? If not, for what other purpose are you planning for your defense readiness mission? Please provide specific details.

ANSWER: This increase in Defense Readiness is not for the Maritime Defense Zones (MDZ). Nearly 90 per cent of the increase in Defense Readiness is for that program's share of pay raises and other cost-of-living type items as computed by the program budget which allocates 5.8% of general costs to Defense Readiness. The only two projects in the incremental request with more than a 5.8% allocation to Defense Readiness are the 378' FRAM Recrewing at 10.1% and the Readiness Exercise Planning at 100%.

SENATOR LAUTENBERG: What is the primary mission for equipping your 378-foot high endurance cutters with Harpoon missiles and the Phalanx weapons system?

ANSWER: Harpoon missiles and the Phalanx weapons systems are being installed on 378-foot high endurance cutters to improve their defensive capabilities when conducting military operations. Because these cutters are tasked to operate with the Navy in time of mobilization, their weapon systems are being upgraded accordingly. Defense readiness is one of the 378's primary missions.

SENATOR LAUTENBERG: I understand that additional crewmen are required on Harpoon and CIWS equipped cutters. How much money (and FTE) will it cost to equip and man each and all of your 378-foot cutters with these weapons systems? Show cost per vessel, new annual appropriations for installation and crewing, and recurring costs to crew, service and maintain these weapons systems.

ANSWER:

ACTUAL COSTS TO COAST GUARD

VESSEL	INSTALLATION	ADDITIONAL CREW
MELLON (FY 89)	$3.3 million	5 FTE $175,000
HAMILTON (FY 90)	$2.47 million	5 FTE $175,000
SHERMAN (FY 90)	$2.9 million	5 FTE $175,000

Future schedule to be developed

PROJECTED COSTS

INSTALLATION - $30.6 million.
ADDITIONAL CREWS - 9 ships, $175,000 per ship per year, total $1,575,000 per year.
SHORE SUPPORT TEAM - 14 FTE, $490,000 per year

PLANNED INSTALLATIONS

FY 89	FY 90	FY 91	FY 92	FY 93
1	3	1	4	3

ACTUAL/PROJECTED FUNDING (millions)

FY 89	FY 90	FY 91	FY 92	FY 93	TOTAL
$3.3	$9.9	$3.2	$13.2	$9.9	$39.5

SHIPBOARD SERVICE and MAINTENANCE - $112,600 per ship per year. This cost is Navy funded

SENATOR LAUTENBERG: The rationale often given for well armed Coast Guard cutters hinges on Coast Guard involvement in Third World or low intensity conflicts. Please provide a simplified unclassified scenario in which the Joint Chiefs are planning to depend on Coast Guard 378' cutters equipped with Harpoon missiles and Phalanx weapons systems?

ANSWER: Cutters have been armed since the inception of the Revenue Marine Cutter Service ... prelude to the Coast Guard ... partly because of our responsibilities as the nation's premier maritime law enforcement agency and our inherent duties as an armed service. A scenario where the Joint Chiefs may consider using the capabilities of a Coast Guard 378' cutter may be near South America: Terrorists have commandeered two fast attack missile boats assigned near the oil refining town of Punta Cardon, Venezuela. Hundreds of super tankers transit this area per month to load crude oil. The terrorists have threatened to blow up a tanker if demands are not met. A Coast Guard 378' on a law enforcement interdiction patrol near Colombia is ordered by JCS ... via the operational commander (OPCON) ... to divert and investigate. The operational commander advises the cutter it may encounter hostile surface vessels. As the 378' approaches the area a fast attack patrol boat closes the cutter and fires a missile. The 378' defends itself by launching a harpoon missile and activating its CIWS defense system.

SENATOR LAUTENBERG: Do the readiness requirements as cited by the Joint Chiefs still indicate the need for these weapons systems? When was this issue last examined by the Joint Chiefs?

ANSWER: Coast Guard high endurance cutters, WHEC 378s, are currently tasked in several CINCLANT and CINCPAC global and regional contingency plans. These missions require a ship which can conduct antisubmarine, antiair, and antisurface warfare. Plans are reviewed annually by the Joint Staff and are outlined in the Joint Strategic Capabilities Plan (JSCP).

SENATOR LAUTENBERG: What are your annual costs to maintain and crew weapons systems with the sole mission of Defense Readiness?

ANSWER: Maintenance costs for defense weapons, including replacements, are funded by the Navy. The Navy reimburses the Coast Guard approximately $22.5 million a year for all maintenance related expenses on defense readiness equipment. The Navy supports everything from .50 cal machine guns to Harpoon/CIWS, ASW equipment (SONAR) and AAW related equipment (air search radars). The Navy also provides training for Coast Guard personnel as well as providing maintenance personnel for various defense systems. Costing out the funds necessary to crew specific weapons systems is difficult since Coast Guard personnel are cross trained in a variety of missions (SAR, LE, MEP) and a variety of minor weapons systems. For one major weapons system, Harpoon/CIWS, we can identify full-time dedicated personnel resources. Five additional personnel are required to operate/maintain Harpoon/CIWS aboard 378' WHECs at an annual operating expense of $175 thousand per ship.

SENATOR LAUTENBERG: The FY 1991 Research and Development estimate for Defense Readiness is $1.34 million. No Defense Readiness projects are clearly identified. Please provide unclassified detail with comparisons with previous years

ANSWER: Page 150 distributes all Research and Development funding, including support work such as personnel, acquisition and engineering, among operating programs. The actual budget sheets, pages 152-171, are a more accurate reflection of actual project funding. No specific Defense Readiness projects were included in the FY91 budget request, since Coast Guard Defense needs were under evaluation. Instead, we included additional flexibility in the Select Project account to accommodate defense Research and Development as projects became defined.

We are presently considering an FY91 National Port Security project to develop a swimmer intrusion capability called the Surface Contact Underwater Tracker (SCOUT) system. The system would be developed in coordination with the U.S. Navy's $43 million Waterside Security Project, and would focus on the detection of both surface and subsurface threats to defense critical port activities.

FY89 and FY90 Defense Readiness Research and Development work included port vulnerability assessment, defense needs analysis, defense technology assessment, equipment interoperability studies, and coastal anti-submarine warfare capabilities assessment.

READINESS EXERCISE PLANNING AND SUPPORT

SENATOR LAUTENBERG: What planning has the Coast Guard done in response to recent world events to readjust mobilization and deployment strategies?

ANSWER: Coast Guard mobilization planning is responsive to guidance and requirements contained in the Joint Strategic Capabilities Plan (JSCP), Navy Capabilities Mobilization Plan (NCMP), and other unified and specified commander's (CINC's) operations plans. The Coast Guard's mobilization plans adequately address the requirements and guidance contained in the JSCP, NCMP, and the CINC's operations plans. The Coast Guard's primary responsibility during mobilization is Coastal Defense within the Maritime Defense Zones (MDZ) of the United States with emphasis in Port Safety and Security (PSS). With the anticipated draw down of U.S. forces overseas, effective U.S. responses to hostilities in foreign countries will rely more heavily on safe mobilization of Department of Defense (DOD) forces and supplies through the nation's ports of embarkation (POE's). This increases the importance of the Coast Guard's support to MDZ commands, especially PSS. The Coast Guard must continue to place emphasis on improving MDZ plans through training, exercising, and keeping pace with improvements in technology. Funding support for these efforts must continue.

SENATOR LAUTENBERG: What planning factors (including threats and vulnerability) were used to determine that 100 exercises (p. 211 of Budget Estimate) should be conducted in FY 1991?

ANSWER: The 100 exercises figure reflects extrapolation of Port Safety and Security/Marine Environmental Response (PSS/MER) historical data for ports or Commanders, Coast Guard Forces (CCGF's). Specific threats and vulnerabilities do not drive the number of exercises, but they do determine the exercise scenarios in various ports. We assume, based on history and general intelligence estimates, that a generic "threat" exists in all ports; therefore, a minimum level of exercising is necessary in those ports. The planning factors for this minimum are outlined below.

Our objective is for each of the 48 CCGF's to participate in one exercise per year. The primary function of this exercise is to test the ability of the local port commander to operate in a heightened threat mode. At the port level our organizational structure for contingencies is different from our day-to-day organization. Consequently, we exercise the command structure frequently to ensure it will be effective and operational when activated. Our policy is for each port/CCGF to conduct or participate in a major field training exercise (FTX) every three years. Therefore, each year 16 CCGF's should be involved in a FTX with 100-200 Reservists mobilized and in significant operation. The remaining 32 CCGF's may have a local FTX--with or without Reservists--of a short duration, testing any contingency organization, such as for flood or other natural disasters. Oil and hazardous material spill exercises are accounted for separately.

Our objective is for each district and CCGF to also participate in a command post exercise (CPX) each year. With 48 CCGF's and 10 districts, this equates to 58 exercises. This set of exercises is normally held in conjunction with the JCS Worldwide Command Post Exercise. We have no discretion regarding schedule. The primary function of these exercises is to test and ensure the interoperability of Coast Guard units with the rest of the defense community (DOD).

Coast Guard units also participate in 20 additional exercises directly supporting CINC's. These include port security unit (PSU) deployments and cutters involved in fleet exercises (FLEETEX's). In these exercises, we participate based on a request from a CINC.

SENATOR LAUTENBERG: What activities are included in the $885 thousand base for defense readiness? Include cutter, aircraft, and personnel hours.

ANSWER: We assume that your question refers to the $885 thousand identified in item 4.k., page 46 of our Budget Estimates. That is the Operations and Maintenance (Operating Guide 30) base for the Contingency Preparedness Support Program (GAC) for readiness exercises and planning support. Table A provides the details of the distribution of the base: $635 thousand supporting field exercise planning and participation ($467.5 thousand to the Commander, Atlantic Area, and $167.5 to the Commander, Pacific Area) to support respective area, district, and MLC planning and participation; $160 thousand supporting travel and administrative expenses for readiness plans development; $40 thousand to Commander, Atlantic Area, for travel and administrative expenses in support of the Coast Guard participation in the annual Navy training/nation-building South American circumnavigation and West Africa Training Cruise (UNITAS/WATC); and $50 thousand for travel and per diem, office supplies and equipment to manage, oversee, plan, participate in, and evaluate readiness exercises at the Headquarters level.

None of the $885 thousand is for cutter or aircraft hours. Cutter and aircraft hours devoted to defense readiness are supported within the hours programmed for each facility.

The only personnel hours supported in this base are the costs associated with pay and allowances for USCG reservists on Temporary Active Duty (TEMAC) orders to provide the additional short-term personnel during periods of peak work load associated with exercise planning and operations plans (OPLAN's) development.

In terms of readiness OPLAN development, the two area commanders support field travel to various Joint Chiefs of Staff (JCS) and commanders-in-chief (CINC's) OPLAN conferences. USCG forces support plans for CINCLANT, CINCPAC, CINCEUR, CINCENT, CINCSOUTH, and CINCFOR. Therefore, the operational commanders, that is, the two USCG area commanders, are represented at all OPLAN conferences which affect the use of USCG forces. Funds are also used to support area planners conferences, sector commanders conferences, and Headquarters planning conferences.

Table A - Distribution of Readiness Exercises and Planning Operating Expenses (OE) Operations and Maintenance (OG-30) Support ($'s in thousands)

Field Exercise Planning and Participation		$635
Commander, Atlantic Area	$467.5	
Commander, Pacific Area	$167.5	
OPLAN Development		$160
Commander, Atlantic Area	$80	
Commander, Pacific Area	$80	
UNITAS/WATC		$40
Commander, Atlantic Area	$40	
Headquarters Exercise Planning, Participation, and Management		$50
Total		$885

SENATOR LAUTENBERG: Virtually no additional exercises have been scheduled since FY 1989 (app. 100 per year). With no increase in the planned number of exercises, how will the $300 thousand you are requesting be used?

ANSWER: The additional funds are needed to adequately perform the exercises we are currently doing without degrading other Coast Guard functions. The base for readiness exercises is not sufficient to conduct the required level of exercises. Additional funding will also allow us to conduct better exercises. An evaluation program was formalized in late FY 1989 which allows us to comprehensively evaluate each exercise to ensure we are testing the right objectives and to determine if those objectives are being met.

SENATOR LAUTENBERG: What is the Coast Guard's role in counter-terrorism as the FBI is the lead federal agency for domestic terrorism?

ANSWER: The primary role of the Coast Guard in counterterrorism is to support the agencies designated to lead federal counterterrorism activity. The Coast Guard would coordinate with the FBI to contain and stabilize a domestic terrorist incident or act on the maritime arena. Because the Coast Guard Captain of the Port (COTP) is responsible for port safety and security in his port(s), and recognizing that the Coast Guard may be the most readily available Federal resource in some localities, The Coast Guard may initially respond to an incident using traditional law enforcement tactics and procedures. The designated lead agency, once on scene, is responsible for deciding when and whether to request Coast Guard resources.

SENATOR LAUTENBERG: Describe the joint planning with the FBI for the 98 readiness/counter-terrorism mobilization exercises conducted in 1989. Be specific in describing the number of interagency meetings, number of FBI personnel involved in (each exercise), FBI critiques, etc.

ANSWER: The only exercise we can address specifically is the joint U.S./Canadian exercise TRANSBORD III held on the St. Clair River, in Detroit, MI. This exercise involved law enforcement and emergency management agencies from the U.S. Federal, state and local levels, along with counterparts from the various levels of Canadian government. Eighteen months of planning went into preparation for this exercise. The FBI was active in the planning for the last 12 months before the exercise. (The number of interagency meetings and the number of FBI personnel involved is not recorded.) During the exercise, the FBI had an active Crisis Action Team at its Command Center in Washington, DC and was on scene at the local Command Center in Detroit. FBI critiques from this exercise were not available to the Coast Guard. The FBI was also active in many local exercises where records would have possibly been kept at the COTP. It would take considerably more time than is presently available to gather the information requested. The Coast Guard will be happy to research this information if it is still desired; however, a more immediate answer may be available from the FBI. Most readiness exercises include the possibility of terrorist/sabotage type activities from the "enemy", but the main theme of the exercises is in support of plans.

SENATOR LAUTENBERG: Were these exercises included in the $885 thousand base? If not, what is the annual cost in personnel hours, cutter hours, vessel hours and estimate dollars of these exercises?

ANSWER: As stated in our answer to the previous question, the only exercise of this type we can address specifically was the internationally driven TRANSBORD III. That exercise was not included in the $885 thousand base. To gather costs and personnel data from other local exercises held, would take considerable time and be very costly, but can be recovered if needed.

SENATOR LAUTENBERG: Describe the purpose of the 170 contingency plan drills (p. 211) scheduled for FY 1991. Compare (by purpose) to the number of drills conducted in FY 1989 and planned for FY 1990. What is the base of those drills? If you cannot provide base funding, provide the number of vessel, aircraft and personnel hours.

ANSWER: Marine Safety Offices (MSOs)/Captains of the Port (COTPs) are required to maintain the following contingency plans:

a. Oil and Hazardous Substance Spill Response
b. Maritime Counter-terrorism
c. Vessel and Waterfront Fire
d. Natural Disaster
e. Civil Disorder

The Coast Guard requires Marine Safety Offices/Captains of the Port to exercise each of those plans once every three years. Execution of a plan in response to a major incident is also considered to satisfy the requirement for the exercise of a plan. Units report the number of drills conducted, personnel hours, boat hours, and cutter hours expended for those drills. However, they are not required to identify which plans were exercised; thus, we have data only on resource hours expended. No funding has previously been provided for these drills. Only On-Scene-Coordinator(OSC)/Regional Response-Team (RRT) drills and mobilization exercises are specifically funded. Resource hours were reported as follows:

	Personnel	Boat	Cutter
FY 89	9410	64	8

Aircraft hours are not recorded because they are gernerally not included in these drills.

SENATOR LAUTENBERG: The 1990 Budget did not include a request for additional funds for Port Safety contingency plan drills (up from 153 in FY 1989). For what purpose were these additional drills and from where were the resources for these additional exercises derived?

ANSWER: The additional drills reported for FY 1990 resulted from an estimated projection based on the number of drills conducted in FY 1989. No specific contingency plan drills other than On-Scene-Coordinator (OSC)/Regional Response-Team (RRT) drills are planned in advance at the Headquarters level. Resources for the additional drills were not specified as line item requests in the FY 90 budget but were instead funded from existing operating funds.

SENATOR LAUTENBERG: On pages 210-211 of the Budget Estimate, a description of certain Defense Readiness functions is included in the activities of the Marine Environmental Protection program under the aegis of the Coast Guard's Port Security mission. For each year since 1984, estimate that fraction (for each year) of the MEP program budget that could be attributed to the Coast Guard's role in Defense Readiness.

ANSWER: The percentage of total Coast Guard that could be attributed to the Port Safety and Security mission for fiscal years 1984 - 1991 is as follows:

Fiscal Year	Percent attributed to Port Safety and Security
Actual 1984	3.58
Actual 1985	3.82
Actual 1986	3.12
Actual 1987	2.69
Actual 1988	3.37
Estimate 1989	3.37 *
Estimate 1990	3.37 *
Estimate 1991	3.37 *

We do not keep statistics which permit us to break down the percentage for the program category of Port Safety and Security into any finer detail. Therefore, we are unable to state how much of the Port Safety and Security percentage is attributable to Defense Readiness alone.

* The actual percentage for a fiscal year cannot be calculated until data for that year have actually been compiled. Therefore, the most current percentage available is used. We are currently in the process of finalizing the actual percentages for Coast Guard's fiscal year 1989 program budget.

SENATOR LAUTENBERG: It is unclear how expanded roles under the Maritime Defense Zone concept relate to the Marine Environmental Protection mission. Compare for each year since 1982, the workload of Marine Safety Offices and Captains of the Port as a function of the number of personnel assigned (and filled) specifically for the Readiness and Port Security missions, the Marine Environmental Response and the Port Safety missions, against the total workload (in man-hours and in man-years) of personnel assigned to those units for Marine Environmental Response, Port Safety and Security.

ANSWER: Maritime Defense Zone (MDZ) responsibilities are distinct from Marine Environmental Protection (MEP) missions. However, common resources are used to accomplish the activities of both programs. For example, boats are employed to enforce security zones during mobilization exercises, and pollution prevention regulations during harbor patrols. MDZ/Readiness Planners work on pollution response contingency plans as well as MDZ and mobilization plans. Vacant billets do occur, but all MDZ/Readiness Planning billets have been filled. The following table illustrates the reported work hours and man-years devoted by active duty personnel on port security, military readiness, mobilization planning/exercises and other MDZ responsibilities at Captain of the Port offices; versus the overall Marine Environmental Response (MER)/Port Safety (PS) workload at these offices:

Work Hrs.	FY82	FY83	FY84	FY85	FY86	FY87	FY88	FY89
MDZ/Port Security, Readiness	39.2K	35.8K	42.7K	39.1K	55.9K	115.5K	86.2K	89.0K
[Man-Yrs]	[23]	[21]	[25]	[23]	[32]	[66]	[50]	[51]
MER/Port Safety	2396K	2348K	2444K	2351K	2189K	2178K	2115K	2032K *
[Man-Yrs]	[1379]	[1351]	[1406]	[1353]	[1260]	[1253]	[1217]	[1169]
MDZ/Mil. Readiness Billets	0	0	0	0	0	23	23	23
Total Billets	1248	1198	1198	1198	1168	1160	1152	1146

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*Hours reported by MSO/COTP offices only. (e.g., does not include work by strike teams, and other hours expended in response to Exxon Valdez)

SENATOR LAUTENBERG: How has the need for secure communications for defense readiness at your field and district units affected Coast Guard mission performance (OE dollars, AC&I for construction and modification of space, and personnel to manage the more complex systems)? Are these costs included in the $885 thousand base?

ANSWER: The Coast Guard maintains the minimum level of secure communications equipment necessary to carry out the performance of all missions. Consequently, costs are not allocated to any single mission. The base figure you cite ($885 thousand) is administrative support of readiness exercises. It is unrelated to the requirement for secure communications.

SENATOR LAUTENBERG: How much actual construction dollars are there in the shore AC&I budget estimate for space and communications equipment installation in support of the defense readiness mission? For which facilities? How much money has been spent or obligated since 1984?

ANSWER: No actual construction dollars are in the FY91 shore AC&I budget estimate for space and communications equipment installation in support of the defense readiness mission. The following table details expenditures since 1984.

FY	AC&I PROJECT TITLE	AMOUNT
84	SECURE VOICE COMMS - RADIO	$1.5 million
86	SECURE VOICE COMMS - RADIO	$2.0 million
87	SECURE VOICE COMMS - RADIO	$0.8 million
89	MARITIME DEFENSE ZONE - C3I	$1.3 million

SENATOR LAUTENBERG: The Coast Guard established 141 security zones in 1989 (p. 211). Provide a breakdown of the agencies and organizations for which these security zones were established. (e.g.--how many of these were in support of DoD., the State Department, Presidential security, etc.?). At what cost? Is the Coast Guard reimbursed for these activities?

ANSWER: There may be a misunderstanding of this particular statistic. There were 141 security zone patrols conducted in 1989.

Any one particular security zone generally requires numerous individual patrols during its existence.

Security zones are established in areas of interest to national security and are a normal part of the Coast Guard's duties in that arena. We do not maintain a centralized data base that would indicate the total number of security zones that have been established. We do know that presidential security and space launch security were involved in generating many of the 141 patrols. To fully answer this question would require an extensive survey of all Coast Guard Captain of the Port (COTP) offices who have the authority to establish such zones. That type of survey would require more time than is presently available.

The issue of costs and reimbursements is complex. Memorandums of Understanding (MOUs) with other agencies concerning national security issues generally state that each agency pays its own way, but that is not always the case; the MOU with each particular agency determines the reimbursement scheme. For instance, based on a MOU with the U.S. Secret Service (USSS), the Coast Guard is reimbursed by the USSS for Presidential security duties only if they are permanent in nature, or involve temporary support for a principal other than the President, Vice President, or other official next in line of succession.

378-FOOT HIGH ENDURANCE CUTTER FRAM, RECREWING AND UPGRADES

SENATOR LAUTENBERG: Provide a status report for each 378' on FRAM, recrewing and upgrades. Include the schedule of vessels still in FRAM or awaiting FRAM, vessels awaiting upgrades (e.g. Harpoon and CIWS) and outstanding costs (funded and unfunded) including (anticipated) source of funds.

ANSWER: The current FRAM and CIWS/HARPOON installation schedules are noted in Table A. Final costs are shown where available. Projected completion costs for cutters in FRAM or about to enter FRAM are contract sensitive and are not shown. Funding summaries for each project are noted as Table B. Each FRAM 378 is recrewed 6 months prior to delivery. Each crew includes 19 additional personnel compared to a pre-FRAM cutter. The increase is primarily a result of a staffing study conducted by the Naval Manpower Engineering Center in July 1985. This increase is required to operate the new equipment suites (weapons and electronics) being added during FRAM.

TABLE A

STATUS OF WHEC 378 FRAM AND CIWS/HARPOON WEAPONS INSTALLATION

CUTTER	HULL	ENTERED FRAM	DELIVERED FROM FRAM	COST	CIWS/HARPOON INSTALLATION (3)	CIWS/HARPOON COST
BATH IRON WORKS						
HAMILTON	**715**	**OCT 85**	**NOV 88**	**$81.7**	**MAR 90**	**$2.5M**
DALLAS	**716**	**NOV 86**	**NOV 89**	**$67.3**	FY 92	
CHASE	718	JUL 89	APR 91	(1)	FY 92	
GALLATIN	721	JUN 90	JAN 92	(1)	FY 93	
TODD PACIFIC SHIPYARDS						
MELLON	**717**	**OCT 85**	**FEB 89**	**$79.9**	**OCT 89**	**$3.3M**
SHERMAN	**720**	**MAY 86**	**JUN 89**	**$70.2**	**MAY 90**	**$2.9M**
MUNRO	**724**	**DEC 86**	**OCT 89**	**$58.7**	FY 90	
BOUTWELL	719	MAR 89	AUG 90	(1)	FY 92	
RUSH	723	JUL 89	JAN 91	(1)	FY 91	
MORGENTHAU	722	NOV 89	JUL 91	(1)	FY 92	
JARVIS	725	AUG 90	APR 92	(2)	FY 93	
MIDGETT	726	OCT 90	MAR 92	(2)	FY 93	

NOTES: **BOLD PRINT DENOTES COMPLETED WORK AND FINAL COST**

(1) CURRENTLY IN FRAM

(2) WILL ENTER FRAM IN 1990

(3) FUNDING YEAR SHOWN, INSTALLATION SCHEDULE TO BE DEVELOPED AS CUTTERS ARE DELIVERED FROM FRAM

TABLE B

FRAM FUNDING SUMMARY
($ MILLIONS)

	PRIOR YEAR FUNDING	FY 90	FY 91	FY 92	PROJECT TOTAL
APPROPRIATIONS	606	97	78	12	793
NAVY FUNDING	35	2			37
PROPOSED REPROGRAMMINGS		12	20		32
TOTAL	641	111	108	12	862

CIWS/HARPOON FUNDING SUMMARY
($ MILLIONS)

	PRIOR YEAR FUNDING	FY 90	FY 91	FY 92	FY 93	PROJECT TOTAL
APPROPRIATIONS	3.3	9.9	3.2	13.2	9.9	39.5
REPROGRAMMING	.6					.6

SENATOR LAUTENBERG: What missions (cutter hours and other planning factors) will these cutters be assigned as they are commissioned?

ANSWER: The primary missions these cutters will be assigned are: Military Operations, Enforcement of Laws and Treaties (ELT) Drugs, ELT Fish (Domestic and Foreign), Operational Training, and Search and Rescue. Approximately 50% of the high endurance cutter's available operational hours will involve ELT activities (drug and fisheries patrols), 48% in military operations and operational training, and 2% in search and rescue activities.

SENATOR LAUTENBERG: What is the required post-FRAM shipboard crew complement? Explain the increase over pre-FRAM crewing?

ANSWER: The required shipboard crew complement after fleet renovation and modernization (FRAM) and the installation of all new weapon systems is 178. The increase over pre-FRAM crewing is primarily a result of a staffing study conducted by the Naval Manpower Engineering Center in July 1985. Most of the increase from pre-FRAM crewing was in operator and technician billets. This increase is required in order to operate the new equipment suites being added during FRAM.

SENATOR LAUTENBERG: Provide a detailed breakdown of the costs for each FRAM for hull, machinery (including power plant and electrical), flight deck, bridge, electronics suite, weapons system installation. How do these costs compare to the original estimates?

ANSWER: The contract for FRAM is a fixed price contract. Therefore, we are not entitled to the contractor's cost information broken down by categories as described in your question. The original contract value for each vessel is available, as is the final cost for the first five vessels. Both of these costs are shown in the delivery schedule in Table A.

TABLE A
STATUS OF WHEC 378 FRAM AND CIWS/HARPOON WEAPONS INSTALLATION

CUTTER	HULL	ENTERED FRAM	DELIVERED FROM FRAM	COST	CIWS/HARPOON INSTALLATION	CIWS/HARPOON COST
BATH IRON WORKS					(3)	
HAMILTON	**715**	**OCT 85**	**NOV 88**	**$81.7**	**MAR 90**	**$2.5M**
DALLAS	**716**	**NOV 86**	**NOV 89**	**$67.3**	FY 92	
CHASE	718	JUL 89	APR 91	(1)	FY 92	
GALLATIN	721	JUN 90	JAN 92	(1)	FY 93	
TODD PACIFIC SHIPYARDS						
MELLON	**717**	**OCT 85**	**FEB 89**	**$79.9**	**OCT 89**	**$3.3M**
SHERMAN	**720**	**MAY 86**	**JUN 89**	**$70.2**	**MAY 90**	**$2.9M**
MUNRO	**724**	**DEC 86**	**OCT 89**	**$58.7**	FY 90	
BOUTWELL	719	MAR 89	AUG 90	(1)	FY 92	
RUSH	723	JUL 89	JAN 91	(1)	FY 91	
MORGENTHAU	722	NOV 89	JUL 91	(1)	FY 92	
JARVIS	725	AUG 90	APR 92	(2)	FY 93	
MIDGETT	726	OCT 90	MAR 92	(2)	FY 93	

NOTES: BOLD PRINT DENOTES COMPLETED WORK AND FINAL COST
(1) CURRENTLY IN FRAM
(2) WILL ENTER FRAM IN 1990
(3) FUNDING YEAR SHOWN, INSTALLATION SCHEDULE TO BE DEVELOPED AS CUTTERS ARE DELIVERED FROM FRAM

SENATOR LAUTENBERG: Given the changing nature of your mission requirements and the given fact that the fleet modernization program is now far more expensive than originally planned, does it still make sense to invest in the operation of all twelve 378s?

ANSWER: Absolutely. The cost to renovate these cutters is just a fraction of what it would have cost to replace them. The 378' WHEC, like all Coast Guard cutters, is a multi-mission capital asset not limited to one mission; thus overall resource requirements would not be reduced commensurate with reductions in any one mission area; e.g. defense readiness. These vessels perform other important missions such as fisheries or drug law enforcement and search and rescue. To illustrate this fact, 378' WHECs accounted for almost one-quarter of all Coast Guard fisheries enforcement in FY 89. Marine environmental missions accounted for 16 per cent of the cutters' operating hours in FY 89. Actual military operations/training accounted for only 13 per cent of the WHECs' operations in FY 89. The WHEC also plays an important role as command and control platforms ... a task well documented by the Valdez oil spill.

SENATOR LAUTENBERG: What would be the impact of mothballing part of the 378' fleet and using the billets and operating and maintenance and AC&I dollars elsewhere?

ANSWER: Mothballing any part of the WHEC-378 fleet would exacerbate the problems caused by an already-serious shortage of cutter days Coast Guard-wide. The Coast Guard has struggled during the Fleet Renovation and Modernization (FRAM) program to perform all required missions, in part through the use of older, less efficient cutters. Our planning, extended operations, and deferred maintenance have all been geared to the return of all post-FRAM 378's to the fleet. The reliance on less capable, more maintenance-intensive, World War II-vintage cutters cannot continue much longer. Furthermore, loss of any of the highly capable WHEC-378s would jeopardize the Coast Guard's ability to perform key missions, including the long-range fisheries patrols in the Pacific Ocean to which the 378 is uniquely suited.

SENATOR LAUTENBERG: Almost 22.5 percent of your sea-going billets will be assigned to these twelve cutters. What percent of your seagoing missions (in cutter hours by mission) will these cutters perform?

ANSWER: In 1989, the seven 378 FT WHECs in operation performed 7 percent of Coast Guard seagoing missions. With all WHECs in commission during the full year (as in FY93), we anticipate that WHECs will perform approximately 13 percent of all seagoing missions.

Of course, these cutters perform some missions of a type, or in an operating environment, which cannot be performed or are not well suited for other cutters. Their C3 capabilities, military readiness capabilities and endurance exceed those of other cutter classes. One 378' WHEC cutter hour is not equivalent to one WPB cutter hour in terms of benefit to various missions.

SENATOR LAUTENBERG: Can these cutters be operated safely and effectively with smaller crews?

ANSWER: The ships could not meet military requirements with smaller crews; In this regard, the Coast Guard consistently understaffs in almost all watchstations when compared to U.S. Navy staffing standards. To illustrate, the model used by the Naval Manpower Engineering Center to develop the complement for 378-foot high endurance cutters assumed that all personnel would be available to make all deployments. There was no provision for personnel to take leave, or to attend schools. The study reported that any requirement to send personnel off the cutter during a deployment would increase the personnel requirements for that unit.

SENATOR LAUTENBERG: If the Tactical Data Information system equipment for the 378s is for Defense Operations shouldn't the Navy share in the funding? Likewise for the 210s?

ANSWER: The Tactical Data Information System (TACDIS) is part of an overall Shipboard Tactical Computer (STC) system installation on Coast Guard 378 FT WHECs and 210 FT WMECs. TACDIS will support other missions as well as defense operations. For example, the system will construct computer generated search areas and serve as a decision aid in support of search and rescue operations; for law enforcement missions, TACDIS will be employed to plot and track air and surface contacts which are suspected to be engaged in illegal smuggling activities. TACDIS will be used as the primary command and control system for defense operations, and can be used as well for any operational situation in any mission area requiring that type of C3 support. As to funding, the Navy is providing the most integral (and most expensive) portion of the system ... the software. One major consideration in selecting the Navy Desktop Tactical Computers (DTC) was that DTC uses JOTS II (Joint Operable Tactical System) software for which the Navy has the proprietary rights. With the promulgation of an interservice support agreement, the Coast Guard will be in a position to obtain, at minimum cost, future software upgrades of the JOTS II software from the Navy. This will greatly reduce the required Coast Guard OE funding for future software development/support.

SENATOR LAUTENBERG: If the request for the Tactical Data Information system is for development of a C3 system why is this not requested in the R&D budget?

ANSWER: Use of the word "development" in the budget request was incorrect. The command, control and communications system will be off-the-shelf. The reasoning for this is to avoid high developmental costs. We will survey existing systems available either commercially or from the government to best meet the requirements established by the Coast Guard for a command, control and communications system.

SENATOR LAUTENBERG: How will the Tactical Data Information system enhance cutter law enforcement operations?

ANSWER: The Tactical Data Information system allows cutters to process, display and track far more contacts than is currently possible with manual systems. The system is designed to electronically plot contacts obtained from shoreside units (e.g. intelligence centers, joint task force centers, land based aerostats) and from other ship sensors (e.g. air and surface radars, electronic detection equipment, or sea based aerostats). Cutters equipped with these systems can more effectively keep abreast of and react to the operational picture.

SENATOR LAUTENBERG: What are the anticipated AC&I and OE costs to install and operate this system on each cutter?

ANSWER: The installation, under Coast Guard contractor, will cost $1.6 million in AC&I funding per 378' WHEC and $.9 million per 210' WMEC. We will fund twelve 378s and sixteen 210s for a total of $34.4 million. In addition, $1.8 million will be needed for developmental costs. The total OE for all 378s and 210s will be $1.7 million per year.

AC&I REQUIREMENTS
(figures in $ Millions)

Class	BY	BY+1	BY+2	BY+3	BY+4	TOTAL
378'	1.8	4.9	4.9	4.9	4.9	21.4
210'	-	3.7	3.7	3.7	3.7	14.8
TOTAL	1.8	8.6	8.6	8.6	8.6	36.2

SENATOR LAUTENBERG: What alternatives to this system were considered/will be considered?

ANSWER: Several alternatives were considered to this system based on an industry survey of command and control systems conducted by the Transportation Systems Center in Cambridge, MA. Some systems were not selected because they could be integrated with only a limited number of shipboard sensors. Other systems were determined to be unacceptable because of the limited capabilities found in the programming language used in the system. An important selection criterion was that the system had to be of an open architecture design; i.e., the system would provide for future system growth. Future software development costs were also considered. The Navy has funded most of the developmental software for the Tactical Data Information system.

IMPROVE 110' (WPB) DEPLOYABILITY

SENATOR LAUTENBERG: It is difficult to tell whether the request (p. 64) to improve 110' (WPB) deployability is a request for personnel to conduct pipeline training or to actually conduct maintenance on these cutters. Please clarify.

ANSWER: The request is for funding to conduct pipeline training for the patrol boat squadron staffs and for additional personnel to perform required maintenance on the cutters. This request will help alleviate critical shortages in maintenance and support which exist on these cutters.

SENATOR LAUTENBERG: What are the programmed underway hours (by mission)? How short are they now of this target? Is the (anticipated?) shortfall due to scheduling or equipment problems?

ANSWER: Program underway hours for 110' WPB's assigned to squadrons are currently 2850, primarily for drug law enforcement in the southeast United States. Generally, these cutters are meeting their underway targets; however, vessel preventative maintenance standards are not being met completely...personnel are over-worked. Without additional maintenance personnel, the high tempo operations that are consistent with the mission of these cutters will eventually reduce availability. Also, the ability of squadrons to deploy is limited by the existing personnel shortages.

SENATOR LAUTENBERG: Provide a copy of the staffing analysis and the Navy model used to substantiate this request.

ANSWER: The criteria used to determine the appropriate manning for the squadrons are contained in U.S. Navy OPNAVINST 5310.18A (Ship Manpower Document/Squadron Manpower Document Development and review procedures) which is accepted by the Office of Management and Budget and Congress. The Navy Manpower Analysis Center (NAVMAC) uses the procedures found in that document to determine naval ship's staffing. Attached is the 110' Island Class Patrol Boat Squadron Staff Manpower Document (STMD), prepared by AmerInd Inc., and pending final approval by the Coast Guard.

[CLERK'S NOTE.--This document is available for review from the subcommittee office files.]

SENATOR LAUTENBERG: Is the shortfall due to design or construction problems or unanticipated operating conditions? Elaborate as necessary and discuss how the warranty on these vessels is addressing any problems with these vessels. How will the problem be addressed for the cutters yet to be delivered.

ANSWER: The squadron patrol boats are, in general, meeting their yearly underway targets. Some boats have not met their target due to equipment casualties. Such problems will likely increase if the high operating tempo of the cutters continues without additional personnel to complete the required preventive maintenance and to repair casualties which occur.

The Patrol Boat Squadrons were originally staffed to support four boats per squadron. Currently, one squadron consists of six patrol boats and the other consists of five patrol boats.

All of the 110' patrol boats assigned to the Patrol Boat Squadrons are beyond the warranty period.

SENATOR LAUTENBERG: Have these cutters been hampered in executing any drug interdiction missions? If so, describe.

ANSWER: Yes, on occasion. As an example, when Squadron 4 110's deployed on an extended drug enforcement operation, maintenance had to be deferred because of personnel shortages and operational tempo. Upon returning to their home port, some cutters were delayed in departing for subsequent scheduled interdiction patrols because of maintenance problems. Problems like this will increase as the cutters age and maintenance requirements increase. Personnel shortages have also hampered crew effectiveness due to heavy work loads.

INVESTIGATION PROGRAM IMPROVEMENTS

SENATOR LAUTENBERG: The Coast Guard Investigations program has requested funding for 8 FTE (half-year) because of an increased demand for investigative services. What is the current workload for this program as a function of major Coast Guard program? (e.g. cases, manhours, time delays, etc.)

ANSWER: The establishment in 1986 of the 5 year update on all Background Investigations (BIs) and National Agency Checks (NACs) stemming from the Walker Spy case resulted in a significant increase for the Investigations Program administrative record staff. BI workload increased by 75% and NAC workload increased 100%. In an effort to reduce the workload without compromising security, the 5 year update policy for NACs was amended to 10 years in 1989. Approximately 450 new investigative requests for BIs and NACs are received each month. An eight month process time is required for completion of the average background investigation. The accepted federal standard for the completion of a BI is three months.

Workload figures for calendar year 1989

Criminal Investigations BIs/NACs Opened	6,098
Backlog	2,500
Manhours	
Total regular personnel hours (1384 X 103)	142,552
Overtime (19.3 manyears)	26,817
Total Hrs	169,369
Administrative hours	- 58,685
Training, leave and miscellaneous hours	- 33,594
Total Investigative hours	77,090

SENATOR LAUTENBERG: How does the Investigations Program workload per FTE and backlog per FTE compare to other agencies' workloads and backlogs?

ANSWER: Workload comparisons are difficult to make. Agencies' responsibilities vary. In the Department of Defense, one agency performs Background Investigations and another does Criminal Investigations; Coast Guard Investigations does both types, balancing available manpower with the urgency of the situation. Information sought from other agencies has not reached the Coast Guard in time to answer the criminal investigation portion of this question; however, the background investigations were compared to the Defense Investigative Service (DIS) with the following results:

BACKGROUND INVESTIGATIONS (BI): CY1988

	DIS	USCG
Annual cases	235,800	2,000
No. of BI Agents	2,176	25
No. of Staff	811	4
Total personnel	2,987	29
Av. cases each	79	69
No. offices	261	35
Contiguous USA	3,025,945 sq. mi.	
Office/sq. mi. ratio	11,600	86,500
Agent/ sq. mi. ratio	1,390	121,037
Time to complete each	88 days	240 days
Cost to complete each	$518.00	$850.00
Backlog average	30 days	120 days
Annual overtime hours	UNK.	7400

SENATOR LAUTENBERG: Describe the new requirements cited in your request (p.47) for personnel security, internal affairs and criminal investigations.

ANSWER: Criminal Investigations: Overall case numbers in 1989 (398) were up from 1988 (333). This 17% increase reflects those cases referred to the Coast Guard Investigations Program for action. Lack of sufficient special agent and support personnel has largely prevented the establishment of a proactive internal investigations program. A recent proposal to permit greater interaction between federal, state and local law enforcement officers on board federal property may require even more agent man-hours.

Personnel Security: Coast Guard special agents are multi-missioned, performing the duties of Series 1811 criminal investigators and Series 1810 general investigators. In addition to the criminal investigations mentioned above, they conduct all of the Coast Guard's personnel security investigations, which totaled 1814 background investigations (BI) in 1989. Over 23,000 national agency checks were completed in the same time period. Due to a shortage of personnel, the backlog of BIs reached 1,250 in 1989 and continues. Our inability to complete these in a timely manner can be detrimental to our overall security program. This is especially serious given our law enforcement and military roles. Plans to contract part of our personnel security program to the Defense Investigative Service (DIS) was unsuccessful because DIS suffered cutbacks. Without more special agents, we cannot meet the growing requirements of the program.

Internal Affairs: For the purposes of this response, the term "internal affairs" includes the above two categories (Criminal

Investigations and Personnel Security) and functions such as intelligence gathering within the Service for the purpose of combatting internal corruption. As noted above, due to the shortage of personnel resources, this program has not been proactive, but relies mostly on referrals from members of the service and others.

SENATOR LAUTENBERG: The request states that training for investigators is being hampered by the urgency of ongoing investigations. What specific criteria makes the need for an investigation urgent? Provide any guidelines used. Describe the training backlog. How does this impact the quality of the investigations program?

ANSWER: Coast Guard Investigations (CGI) is the investigative service of the Coast Guard. Within the jurisdiction of the Coast Guard, CGI is specifically responsible for investigating all crimes committed against the United States Government, including attempt or conspiracy to commit such offenses. The urgency of an investigation is dictated by the seriousness of the offense; the need to protect life and property; the need to preserve crime scenes; contain witnesses; recover and preserve evidence; gather facts; maintain security, including national security and the preservation of good order and discipline of the military command. The guidelines for investigative practices come from common sense, program manuals, court decisions and established rules of evidence. Due to the small number of Coast Guard special agents, the growing workload makes it increasingly difficult to remove a special agent from his duties to attend proficiency training (such as courses in white collar crime, technical investigations, field evidence collection, fraud, homicide and arson). We have been forced to cancel or postpone long-scheduled agent training when investigative needs have prevailed.

210' CUTTER MAJOR MAINTENANCE AVAILABILITY

SENATOR LAUTENBERG: Provide a detailed breakdown of the costs for each MMA for hull, machinery (including power plant and electrical), flight deck, bridge, electronics suite, and weapons system installation. How do these costs compare to the original estimate (s)?

ANSWER: We track MMA costs in a different format than requested. Table A and B contains a detailed breakdown of each MMA Hull.

Table A
CG YARD CUTTERS ($ MILLIONS):

	A-1	A-2	A-3
LABOR:	11.0	10.1	10.5
MATERIAL:	4.3	5.45	5.9
ELECTRONICS	0.95	1.0	1.0
DESIGN (TOTAL/5 "A" CLASS):	0.7	0.7	0.7
PROVISIONING (TOTAL/16):	0.5	0.5	0.5
CARETAKER CREW:	0.7	0.7	0.7
MISC:	0.0	0.3	0.55
TOTAL:	$18.15	$18.75	$19.85

Table B

FOR COMMERCIAL YARD ($ MILLIONS) :	B-1	B-2*
LABOR, MATERIAL, NONGOV. ELECTRONICS:	22.2	22.4
GOV. ELECTRONICS:	0.5	0.5
GOV. FURNISHED MATERIAL:	0.8	0.8
DESIGN:	3.2	1.4
PROVISIONING (TOTAL/16):	0.5	0.5
SUPSHIP/CG ADMIN:	1.5	1.9
TOTAL:	$28.7	$27.5

*Final settlement pends.

SENATOR LAUTENBERG: How much of this request is for weapons system installation?

ANSWER: The weapons system work being completed as part of the 210 FT cutter Major Maintenance Availability (MMA) includes an overhaul of the 3"/50 gun and ammunition hoist and an upgrade of the armory. The average cost per cutter already completed is approximately $108,000, with $61,000 provided by the Navy for the gun overhaul.

SENATOR LAUTENBERG: Provide for the record the work and redeployment schedule.

ANSWER: Table A contains a detailed breakdown of each 210-foot cutter schedule:

Table A

	CUTTER NAME	HULL NO.	MMA ENTRY	MMA COMPLETE
	"A" CLASS			
1	ACTIVE	618	OCT 84	FEB 87
2	CONFIDENCE	619	OCT 86	JUN 88
3	RELIANCE	615	APR 87	JAN 89
4	VIGILANT	617	FEB 89	AUG 90
5	DILIGENCE	616	SEP 90	FEB 92
	"B" CLASS			
1	DURABLE	628	OCT 86	JAN 89
2	COURAGEOUS	622	MAR 87	MAR 90
3	VIGOROUS	627	JUN 91	NOV 92
4	VALIANT	621	DEC 91	MAY 93
5	STEADFAST	623	JUN 92	NOV 93
6	ALERT	630	DEC 92	MAY 94
7	DAUNTLESS	624	JUN 93	NOV 94
8	VENTUROUS	625	DEC 93	MAY 95
9	RESOLUTE	620	JUN 94	NOV 95
10	DEPENDABLE	626	DEC 94	MAY 96
11	DECISIVE	629	JUN 95	NOV 96

"A" Class and B-3 thru B-11 are scheduled to deploy approximately six weeks after completion. B-1 deployed approximately three months after completion. B-2 is scheduled to deploy approximately six months after completion.

RELOCATE CG INTELLIGENCE COORDINATION CENTER

SENATOR LAUTENBERG: What missions does this center support?

ANSWER: The Coast Guard Intelligence Coordination Center (ICC) provides intelligence support to various Coast Guard programs and missions. The predominant missions supported are: Enforcement of Laws and Treaties; Port Safety and Security; Defense Readiness; and terrorism-related personnel and facility security. It is tasked with providing indications and warning services and finished strategic, operational, and (when appropriate) tactical intelligence support. The ICC is the primary point of contact between the Coast Guard and the National Intelligence Community for current intelligence collection, analysis, and production.

SENATOR LAUTENBERG: The Coast Guard will purchase 5000 square feet (at $360 square feet) of secure space at the new Naval Intelligence Command Center at Suitland, MD presently under construction. In the absence of funding under a DOT appropriations act, would the DOD fund that share of the Defense Readiness mission this center will support?

ANSWER: This question should officially be answered by Department of Defense (DOD), but it is our opinion that DOD would not fund some share of our portion of the construction costs. We are paying for construction of 5000 square feet because it is more advantageous for both security and access if the Coast Guard Intelligence Coordination Center (ICC) can be located with the Navy.

A move of all DOT agencies into a single building also pends. It is more economical for the ICC to relocate to the Navy facility already being built to the proper security standards than to work the ICC and its security standards into the DOT plans for future construction.

SENATOR LAUTENBERG: In light of recent events in Eastern Europe and Central America what considerations for a reduced ICC staff and space requirements have been given?

ANSWER: The events in Europe and Central America have had no impact on the Intelligence Coordination Center's (ICC) work load. None of the ICC personnel is dedicated solely to defense readiness intelligence or political intelligence issues in Eastern Europe and Central America. Intelligence issues in these areas are handled as a collateral duty. The main thrust of the ICC is currently in support of Coast Guard law enforcement (primarily counternarcotics).

SENATOR LAUTENBERG: What savings in GSA leased space (4,342 square feet in the Trans Point building) will accrue? Why haven't these savings been identified as offsets?

ANSWER: The space currently occupied by the Intelligence Coordination Center (ICC) will be used to alleviate the shortage of workspace in the Coast Guard Headquarters building when occupancy of the new ICC site occurs in early FY93.

RESERVE TRAINING

SENATOR LAUTENBERG: Reserve augmentation of Coast Guard forces responding to natural or man-made disasters or emergencies, stems from Congressional direction provided in the early 1970's. A review of recent Coast Guard budget requests and the October 24, 1989 Reserve Forces Program Description suggests that this mission has taken a distant second seat to the Coast Guard Defense Readiness mission. Indeed, the Reserve Forces program goal and implementing strategies do not touch on this important mission. Why not?

ANSWER: The fact that these missions are not discussed specifically in the Reserve Forces Program Description should not be interpreted to mean that their importance has diminished or that they have taken a distant second seat to the Coast Guard Readiness mission. Augmentation training prepares Selected Reservists for a wide range of contingencies, from natural or man-made disasters to full scale mobilization. Consequently, the training strategy which supports mobilization, equally supports preparing our reservists for response to natural and man-made disasters.

SENATOR LAUTENBERG: Your budget requests a 10.2% increase, or $7.3 million in additional dollars to increase your selected reserve strength from 12,050 to 12,700. Your primary objective in this request is in support to achieve 95% of required mobilization levels of JCS FY 1999 wartime taskings of 26,000 selected reserves. Do you believe it still appropriate given the changes in the international environment? When did the JCS last set your goal for your reserve strength needs?

ANSWER: Yes, given the current changes in the international environment and the expected drawdown of DOD active forces in total and especially those deployed overseas, achievement of planned mobilization levels in the Coast Guard Selected Reserve takes on greater significance. With a larger percentage of U.S. forces based in this country rather than forward deployed, the ability to quickly redeploy overseas through U.S. ports would place a more significant potential demand on the Coast Guard to make ports of embarkation safe and secure. All 26,000 reservists would be necessary to protect the current number of strategic ports in a major long-term conflict.

The Joint Chiefs of Staff (JCS) organization does not directly set the Coast Guard's goal for Reserve strength requirements. JCS provides, through the Joint Strategic Capabilities Plan, the capability requirements on which Coast Guard contingency plans are based. These capability requirements, through the planning process, are translated into the overall personnel strength the Coast Guard must have in order to provide the capability JCS has asked for. The Reserve strength requirement is the difference between the total strength requirement and the number of active duty personnel on board. The last Joint Strategic Capabilities Plan was received by the Coast Guard in April 1988.

SENATOR LAUTENBERG: The Committee has heard reports that training of reserves by your field units takes up considerable time. Even though you attempt to train reserves while performing your regular missions, doesn't this training function present a burden in terms of "regular" personnel, time, and fuel? When was the last time this impact was studied? Provide the latest study.

ANSWER: The training of all personnel, active and reserve, takes up a great deal of time and effort. But it is not considered a burden. It is a requirement for maintaining a skilled and ready service. Most active units consider their Reserve personnel as an integral part of their manpower pool, and depend on them during surges in operational requirements or emergencies. It is to the active units' advantage to have their reservists trained. A large part of a reservist's training occurs as personnel perform missions for which the support costs (time, fuel, etc.) have already been budgeted. The Reserve Program provides reimbursement for some actual costs such as fuel and equipment, but the real payback is the additional trained manpower available to the active duty unit commander.

There has not been a specific study conducted to quantify or evaluate this impact.

SENATOR LAUTENBERG: In the Presidente Rivera oil spill last summer, 200 Delaware National Guard troops were brought in to assist clean-up. Were Coast Guard Reserves considered for that duty? If not, why not?

ANSWER: There was a significant Coast Guard Reserve response to the M/V PRESIDANTE RIVERA spill in the Delaware River in June 1989. A total of 48 reservists participated on a voluntary basis, starting immediately after the spill and continuing throughout the cleanup activity. Reservists were involved in small boat operations, port operations, shoreline surveys, on-scene spill monitoring evaluations, booming-off spill areas, supervising cleanup actions and operations center staffing.

SENATOR LAUTENBERG: How many major disasters nationwide did the Coast Guard respond to in FY 1989 and FY 1990?

ANSWER: The Coast Guard responded to a variety of disasters in FY 1989 and thus far in FY 1990. Those which might be termed major included Hurricane Hugo; the Loma Prieta earthquake in San Francisco; this spring's flooding on the Arkansas River, Red River, and the Lower Mississippi River; the oil spill from the EXXON VALDEZ in Prince William Sound and the fire and oil spill from the MEGA BORG in the Gulf of Mexico. In addition, the Coast Guard responded to major oil spills from the PRESIDENTE RIVERA in Delaware Bay, the WORLD PRODIGY in Narragansett Bay, the AMERICAN TRADER off Huntington Beach, CA, and the NAUTILUS in the Kill Van Kull waterway in New York Harbor. We also provided assistance following Tropical Cyclone Ofa in the Samoa Islands.

SENATOR LAUTENBERG: In how many (and which) of these emergencies were Reserve personnel and units called up, including the EXXON/VALDEZ, Hurricane Hugo, and the San Francisco earthquake?

ANSWER: Coast Guard Reservists made up over 60% of the personnel assigned to the EXXON VALDEZ cleanup in 1989 and scheduled thus far through the Summer of 1990. This represents over 27,000 man days of direct support.

93 reservists voluntarily provided more than 388 man days of support in the aftermath of hurricane Hugo. Reserve support included establishing and manning temporary communication support; conducting small boat operations to assist local residents; providing administrative support; preparing hot meals; and, staffing the Charleston County Emergency Preparedness Operation Center.

In the aftermath of the San Francisco Bay Area earthquake, 35 reservists voluntarily provided assistance. Reservists conducted damage assessment, inspected waterfront facilities, provided shoreside and waterside transportation, stood Operation Center watches and served as boat crew members.

SENATOR LAUTENBERG: How many pollution response qualified Reserves are there available in the Connecticut, New York, New Jersey, Delaware, and Maryland area for recall to active duty in the event of another major oil spill in the ports of Philadelphia or New York?

ANSWER: Coast Guard reservists are not qualified specifically for a pollution response mission. However, the qualifications and skills of many individual reservists and mobilization teams are transferable to pollution response activities. The important aspect is how many reservists are available to respond when the contingency occurs. Reserve response can take many forms ranging from direct involvement to backfilling for active duty personnel temporarily transferred to assist in the contingency requirement. This insures that most reservist's skills and qualifications could be utilized in one form or another and increases the flexibility of the Coast Guard to provide assistance. There are 180 reservists assigned in the Philadelphia port area and 400 reservists assigned in the New York port area. In addition, over 1,500 other reservists are assigned in the Fifth Coast Guard District and 2,000 other reservists are assigned in the First Coast Guard District who are available to be used as necessary for the specific pollution response requirement.

SENATOR LAUTENBERG: Does the Coast Guard have a reserve call-up plan for natural or man-made disasters? If not, why not? If yes, describe the plan for the NY/NJ and Delaware River/Bay areas.

ANSWER: The Coast Guard has contingency plans for a wide variety of disasters. These plans are generally developed and implemented in the greatest detail at the local or port level. In every plan, personnel requirements are set forth. In the event locally based personnel are insufficient to handle a disaster, the local commander will report this to the cognizant district commander (First Coast Guard District, Boston, MA for the port of New York area and Fifth Coast Guard District, Portsmouth, VA for the Delaware River/Bay area). The district commander has a number of options available including reassigning additional active duty members temporarily to units responding to the disaster, voluntarily recalling reservists, requesting the involuntary recall of reservists, and seeking assistance from other agencies through the activation of Memoranda of Understanding/Agreement. These options are generally exercised in the order stated since this order mirrors the response time that can be expected for each of these categories of personnel.

Coast Guard reservists may be recalled to active duty voluntarily under 10 U.S.C. 672(d). District commanders are limited by policy to recalling no more than 10 officers and 100 enlisted personnel at any given time. The Commandant may further extend this authority if so requested.

The Secretary of Transportation, subject to the approval of the President, may recall Coast Guard reservists to active duty involuntarily under the authority of 14 U.S.C. 712 for a serious man-made or natural disaster. This authority is limited to a recall of no more than 14 days in any four-month period and 30 days in any one-year period. Such a recall may be requested by a district commander as one of the options available for handling personnel requirements.

SENATOR LAUTENBERG: On page 143, $1,350,000 is requested to restore training and support funds diverted to absorb last year's pay raise. Why is this funding necessary? Specifically, what training would be restored (number of personnel and type of training)?

ANSWER: In the FY 1990 Reserve Training Appropriation, no funding for the pay raise effective on January 1, 1990 was provided. The result of this "absorption" and the other funding actions was that the total funding available would support a full training program for a Selected Reserve of only 12,050 during FY 1990. The request for restoration and annualization of pay raise funding in FY 1991 coupled with the other funding requested, will continue the full training program for 12,050 reservists and will permit growth in the Selected Reserve of 650 personnel to a total of 12,700. Failure to provide this funding would force a reduction of 300 Selected Reservists. Maintaining a fully trained and capable Reserve force is of primary importance. The size of the Selected Reserve will be adjusted based on the total level of funding provided by the Appropriation.

SENATOR LAUTENBERG: Specifically, how did the diversion of resources from support areas erode the operational readiness of the Selected Reserve?

ANSWER: The FY 1990 President's Budget for the Coast Guard Reserve was $73,800,000. This would have fully supported a Selected Reserve of 12,600. This level of Selected Reserve would meet 45.8% of our mobilization requirements for a major sustained conflict. The actual FY 1990 Appropriation of $71,614,000 fully supports 12,050 or 43.8% of our mobilization requirements. The FY 1991 budget request will support 12,700 reservists which is 46.1% of our mobilization requirements. The size of the Selected Reserve supported by each fiscal year's appropriation will be fully trained and capable of performing mobilization assignments. However, the operational readiness of the Coast Guard to perform its full mobilization mission is directly related to the funded size of the Selected Reserve.

SENATOR LAUTENBERG: In the table on page 139, 1990 Selected Reserve estimates are listed as 12,100. This is consistent with estimates provided in the table on page 219. To increase Selected Reserve Forces to 12,700, funding for 650 Selected Reservists is requested. Please explain why the request is for 650 vice 600?

ANSWER: The tables on pages 139 and 219 of the FY 1991 Budget Estimates both refer to 12,100 Selected Reservists as the projected end-of-year strength. The line item to increase the size of the Selected Reserve by 650 to 12,700 is based on the FY 1990 recurring funded strength level of 12,050, not the projected end-of-year strength. The difference is between average strength and end strength.

SENATOR LAUTENBERG: Why is the ratio of enlisted to officer (app 6.5:1) for Selected Reserves greater than the ratio in the regular Coast Guard (app 4.3:1)? Likewise for ready reserves (6.6:1)?

ANSWER: The requirement for officers in the Selected Reserve is based on readiness planning factors and mobilization needs, not on the number of enlisted in the Selected Reserve.

SENATOR LAUTENBERG: In the table on Reserve Augmentation Training on page 218, the category "Other Field Operations" is approximately 40% of all reserve augmentation training. It is common practice to define categories such that the catch all "other" category does not exceed ten percent. Please further define augmentation in this "other field operations" category.

ANSWER: The 40 percent "other field operations" category in the table on page 218 of the Budget Estimates includes aviation at 6 percent, structured training not described elsewhere at 19 percent, and readiness exercises/Maritime Defense Zone planning at 15 percent.

SENATOR LAUTENBERG: In 1988 reserve augmentation manhours totaled 1,318,408 hours, for 12,084 reserves or 109 hours per year for each reservist. In 1989 augmentation manhours totaled 1,908,172 manhours, for a 12,042 reserve strength or 158 hours per year per reservist. Similar apparent disparities can be found in other years that cannot be explained away easily by reference to budget cuts (e.g. FY 1987 average equals 133 hours per reservist per year.) Please explain.

ANSWER: The Coast Guard has been increasing the amount of augmentation of active duty missions performed by reservists during their scheduled active duty for training (ADT) and inactive duty for training (IDT) periods. This is reflected in the increase in the total augmentation hours and the average per reservist shown in the Budget Estimates from FY 1987 through FY 1991. FY 1988 actual performance presents an aberration of the trend and should be disregarded. During FY 1988, the Reserve Training Appropriation was reduced 12% below anticipated levels. This occurred three months after the fiscal year began and resulted in a reduction of 1,200 personnel, one-third of the ADT activities for the remaining personnel, and reduced IDT for the remaining senior personnel. This reduced training program affected the number of personnel and amount of time available for augmentation.

SENATOR LAUTENBERG: Your 1990 and 1991 reserve augmentation manhours estimates suggest that you have assumed 158 hours per reservist per year (2,007,000 manhours-per year/12700 FY 1991 Reserves), the same as your FY 1989 figure. Is your FY 1989 data actual or estimated? If each reservist performs 2 weeks ADT per year (at 80 hours) then is a reservist expected to perform only 6.5 hours ADT per month (78 hour/12 months)?

ANSWER: The FY 1989 data represent actual full-year augmentation hours. Augmentation hours are a part of the total training hours available during active duty for training (ADT) and inactive duty for training (IDT) periods. For a force of 12,700, 1,016,000 ADT (at 80 hours each) and 2,438,000 hours of IDT (at 48 drills of 4 hours each) would be incurred. Of this total 3,454,000 hours of training, 2,007,000 hours are projected to be performed as augmentation of active Coast Guard units.

SENATOR LAUTENBERG: Please provide estimates on the functional distribution of Reserve Augmentation Training (page 218) directly attributable to military readiness and directly attributable to all other Coast Guard missions.

ANSWER: Of the total augmentation training accounted for in the table on page 218 of the Budget Estimates, 15 percent is directly attributable to military readiness, with the remaining 85 percent attributable to all other Coast Guard missions.

SENATOR LAUTENBERG: What are the annual attrition rates (and real number losses) for selected reserve officers and enlisted?

ANSWER: The actual officer losses in the Selected Reserve through the first six months of FY 1990 are 66, which is an annual attrition rate of 8.2 percent. The actual enlisted losses through the first six months of FY 1990 are 835, which is an annual attrition rate of 16.0 percent.

SENATOR LAUTENBERG: What are the annual accession rates (and real number increases) into the individual ready and inactive standby reserve from the regular and selected reserve?

ANSWER: The number of increases and decreases that occur each year in the Individual Ready Reserve (IRR) and the inactive Standby Reserve reflect a variety of reasons. The size of these categories of the Coast Guard Reserve is not managed, but is simply a reflection of inputs from a number of sources (principally persons being released from active duty) and expirations of military service obligations or other changes in status. At the beginning of FY 1989, the IRR contained 5,562 members and at the end of the year it was 5,199, representing a net loss of 363 personnel. At the beginning of FY 1989, the Standby Reserve contained 490 members and at the end of the year the strength level was 562, representing a net gain of 72 personnel.

SENATOR LAUTENBERG: Describe the Coast Guard recruiting program for the individual ready reserve and inactive reserve.

ANSWER: There is no recruiting program for the Individual Ready Reserve (IRR) and the inactive Standby Reserve. Personnel released from active duty who have a remaining military service obligation but are not going to participate in the Selected Reserve are placed in the IRR. Personnel recruited into the Selected Reserve can be transferred into the IRR. Personnel are assigned to the Standby Reserve for various administrative reasons. Personnel in the Standby Reserve have a lower priority of mobilization than members in the Ready Reserve.

SENATOR LAUTENBERG: What would be the impact of reducing selected Reserve strength to 1980 levels?

ANSWER: The impact of reducing the Selective Reserve strength to 1980 levels would be a further reduced ability of the Coast Guard Reserve to meets its mobilization requirements. At a Selected Reserve force level of 12,050, the Coast Guard Reserve meets only 44% of its mobilization requirements. At 1980 personnel levels of 11,700 Selected Reservists, the Coast Guard Reserve would be able to meet 43% of its mobilization requirements.

BOATING WHILE INTOXICATED

SENATOR LAUTENBERG: You are requesting funds to institute a nation-wide "Boating While Intoxicated" enforcement program. I understand that a successful pilot enforcement and public education program was conducted in the Gulf Coast and Mid-Atlantic districts. How successful was your pilot program? Any lessons learned? How will these successes and lessons be integrated into the national program?

ANSWER: The Boating While Intoxicated (BWI) pilot program was conducted August 26, 1989 - November 1, 1989. In this pilot program fourteen intoxicated operators were removed from the water. We performed BWI enforcement during the course of normal operations. We did not conduct any special BWI enforcement operations. We are hopeful that the small numbers of operators cited indicate that boaters have modified their use of alcohol in response to an increased awareness of the dangers of operating a vessel while intoxicated.

During the pilot program we learned that more breathalyzers and calibration devices are needed. The exact distribution depends largely on the geography and concentration of Coast Guard units. Our funding request would provide the minimum quantity necessary to proceed with a meaningful nationwide program ... though the quantities would be less than ideal based on the pilot program results. The tests also confirmed our belief that a proactive public affairs campaign, at the headquarters, district and unit level is necessary to ensure public awareness and support of the program. Some examples of effective efforts included: a patrol boat took on board a radio station reporter to observe BWI enforcement procedures; district staff personnel attended a Boating Safety Seminar and were subsequently interviewed by local newspapers and TV; headquarters prepared written and video press releases, pamphlets and posters. Overall, the test districts indicated that public acceptance was good ... much better than they had expected.

Most importantly, test districts emphasized that close coordination with state and local law enforcement authorities is critical. Though groundwork was laid at the district/state level, the most effective liaison work was done by local units who coordinated with their counterparts. Contacts were made and working relationships were established which expedited handling of the cases that occurred. However, we also learned that Coast Guard operational commanders cannot always count on states accepting responsibility for intoxicated operators detected by the Coast Guard.

Nationwide implementation of BWI will closely mirror the pilot programs conducted in the Fifth and Eighth Coast Guard Districts. Many of the steps necessary to begin actual enforcement are the same ... except on a larger scale. The Coast Guard has set a target date of June 1991 for the start of BWI enforcement nationwide. In the interim the Coast Guard will continue training personnel and development of the nationwide implementation plan for BWI. Assuming the necessary funding is provided, we will also begin procurement of the needed equipment.

SENATOR LAUTENBERG: Drunken boaters are turned over to local authorities. Have there been any problems in cooperation?

ANSWER: When Boating While Intoxicated violations occur in areas of concurrent state and federal jurisdiction, the Coast Guard seeks to transfer custody of the intoxicated operator and vessel to the state authorities. This is not always possible since some states have laws that preclude their law enforcement officials from arresting an individual for a BWI violation in Coast Guard originated cases. This occurs in states where under their law, BWI is a misdemeanor, which in effect requires that their law enforcement officer witness the offense. During a pilot program between August 26, 1989 and November 1, 1989, there were five cases in which local officials declined to assume custody.

SENATOR LAUTENBERG: What happens when local officials do not take custody of the drunk boater? Does the federal government prosecute every case?

ANSWER: In cases where local officials did not take custody of the intoxicated operator, the Coast Guard pursued federal adjudication of the cases either civilly through the Coast Guard Hearing Officer process or criminally by referral to the U.S. Attorney for the area. In any case the voyage is terminated and the intoxicated operator eliminated as a threat to public safety.

SENATOR LAUTENBERG: Does your budget request include funding for these federal cases?

ANSWER: Our budget request includes funding for these federal cases only from an evidentiary standpoint. The funds will allow us to procure needed breathalyzers and calibration devices, and perform necessary Boating While Intoxicated (BWI) training.

SENATOR LAUTENBERG: What provisions of the pending oil spill legislation are aimed at ensuring that U.S. merchant mariners don't have a record of substance abuse that may indicate incompetence?

ANSWER: The pending bill would give the Coast Guard access to the National Driver Register to check for driving while intoxicated and/or under the influence convictions on an applicant's record. It would also require programs to be established for drug and alcohol testing of applicants, and expand the Coast Guard's authority to seek suspension or revocation of licenses or documents for substance abuse incidents. Another provision would require merchant mariners documents to be renewed every 5 years, allowing the Coast Guard to periodically evaluate the holder's eligibility and qualifications.

SENATOR LAUTENBERG: How soon after passage of the legislation will you have regulations and a program in place?

ANSWER: Based on prior regulatory projects for implementing drug testing programs and the Federal Aviation Administration's development of regulations for checking the National Driver Register, it is estimated that regulations and programs could be in place in 2 years.

SENATOR LAUTENBERG: Are the resources requested ($1.868 million and 21 FTE) in your FY 1991 budget for merchant mariner licensing and documentation consistent with the full range of activities anticipated by the pending oil spill bill?

ANSWER: The resources required to accomplish the additional license and document activities are estimated to be 43 billets and $3.2 million. Since the billets are not expected to be established until the third quarter of the fiscal year, the half year funding of 43 positions equates to 21 FTE. The figures also include the start up costs for the billets.

CRUISE SHIP SAFETY

SENATOR LAUTENBERG: The recent fire aboard the Bahamian flagged SCANDINAVIAN STAR killed over 160 people; none were U.S. passengers. As recently as 1988, that same vessel experienced an engine room fire; in that incident it was carrying U.S. passengers. I suspect many of the passengers on foreign registered cruise ships are senior citizens on their dream vacation. What is your assessment of the risk on foreign passenger vessels from poorly maintained fire safety systems and incompetent crews?

ANSWER: There will always be some risk involved with such voyages, but a lot has been done over the years to reduce that risk. More can always be done, and as international standards in the form of the International Convention for the Safety of Life at Sea (SOLAS) are upgraded, the risk will continue to be diminished. Equipment and material standards have been stiffened markedly in the last 35 years and should continue to be. Designs are also continuing to improve, offering built-in safety features, such as, a protected means of escape to the boat deck and optimum location of primary lifesaving equipment.

Newer vessels, because of the upgrading of previous SOLAS standards, have less risk than older vessels. The phasing out or upgrading of older vessels has also been a frequently discussed topic within the Coast Guard and will be discussed at International Maritime Organization (IMO) Subcommittee on Fire Protection this year.

The major factor to be dealt with today is the human element of ships. The Coast Guard is concerned with the lack of international standards for drills, training in emergency procedures, and communication among the crew and officers, and between the crew and the passengers who rely upon them in an emergency. This has been a recent topic at the IMO and at other forums, and undoubtedly will be one of the major findings of the most recent SCANDINAVIAN STAR incident. The Coast Guard has encouraged cruise ship owners to voluntarily improve the level of training among crewmembers as well as other aspects of their ship management practices.

SENATOR LAUTENBERG: Are other vessels owned or operated by the same owners or operators of the Scandinavian Star certified to operate in U.S. waters? What is the safety record and record of non-compliance of these vessels? (Include records of violations and disposition.)

ANSWER: First, it must be understood that at the time of the accident, the SCANDINAVIAN STAR had recently changed ownership and service. The SCANDINAVIAN STAR not only was sold, but changed crews (except for the Master), changed service (from a passenger cruise liner to a ferry), and changed area of operation from the Caribbean to the North Seas. The new owners of SCANDINAVIAN STAR operate no other vessels in U. S. service. The former owner does. The previous operator of the SCANDINAVIAN STAR is Sea Escape, Limited. They currently operate the TROPICANA, SCANDINAVIAN SAGA, and SCANDINAVIAN SUN.

Violation reports typically are not issued for foreign flag passenger vessels for noncompliance with the Safety of Life at Sea (SOLAS) agreement. Instead, vessels which are deemed not to be in compliance are not permitted to embark passengers from a U.S. port. If minor interpretive issues are discovered, conditional permission for operation may be granted. Interim operational restrictions may include additional roving fire patrols, additional fire detection or extinguishing systems, or prohibition of the use of some spaces. Passengers may be prevented from boarding in cases of materiel deficiencies, such as inoperative fire doors or fire extinguishing systems. Attached is a list of vessels on which the Coast Guard has taken Port State control actions.

The TROPICANA was delayed from departure in 1988, until the crew could successfully complete required safety drills. A videotape of this has been sent to the Subcommittee on Merchant Marine of the House Committee on Merchant Marine and Fisheries.

The SCANDINAVIAN SUN, which currently operates from the port of Miami, had a major fire in an auxiliary engine room in 1984 which resulted in the death of one passenger and one crewmember.

Coast Guard casualty records also show minor casualties to both the SCANDINAVIAN SAGA, in 1989, and the SCANDINAVIAN SUN, in 1982.

The vessels which Sea Escape operates in the U.S. currently have no outstanding discrepancies and are considered to be in full compliance with SOLAS standards.

SUMMARY LIST OF PORT STATE CONTROL ACTIONS

Vessel: M/V TROPICANA (Bahamas)
Operator: Tropicana Cruises, Inc.
Classification Society: Lloyds
Built: 1966
Exam Location: Miami
Date: DEC 88
Deficiencies:

1. Insufficient lifesaving equipment.
2. Modificationss without upgrading lifesaving equipment.
3. Added crew & passenger accomodation areas.

CG Action

1. Sought flag Administration inpretations.
2. Required additional lifesaving equipment.
3. Limited number of passengers carried.
4. Required installation of smoke detection.
5. Required stability analysis because of pool.

Vessel: S/V WIND SPIRIT (Bahamas)
Operator: Windstar Sail Cruises
Classification Society: Bureau Veritas
Built: 1988
Exam Location: San Juan
Date: OCT 88
Deficiencies:

1. Service spaces opening into stairtowers.
2. Classification of spaces, structural fire protection.
3. Missing draft stops in overhead. accomodatioioionn areas.
4. Main Vertical Zone exceeds 40 meters.

CG Action

1. Sought flag Administration inpretations.
2. Accepted installed smoke detection systems.
3. Required structural modifications, enclosed stairway, additional lobbies, draft stops.

Vessel: M/V WESTERDAM (ex: HOMERICA,
Bahamas)
Operator: Home Lines Cruises, Inc.
Classification Society: ABS
Built: 1957
Exam Location: New York, revisit US after conversion overseas
Date: MAR 90
Deficiencies:
1. Intrepretation of glass bulkhead use/classification of space.
2. Service spaces opening into stairtowers.

CG Action
1. Accepted glass bulkhead, not an MVZ.
2. Required openings into stairtowers to be closed off.

Vessel: M/V VASCO DA GAMA (Panama)
Operator: Eastcoast Overseas Corporation
Classification Society: ABS
Built: 1961
Exam Location: New York
Date: SEP 89
Deficiencies:
1. Wood in stairtowerrs, opening into stairtowers.
2. Excessive steps (10 meters) in main vertical zone boundaries.

CG Action
1. Visited U.S. once, turned vessel away-no U.S. pass permitted to board.

Vessel: M/V CROWN ODYSSEY (Bahamas)
Operator: Royal Cruise Line
Classification Society: Lloyds
Built: 1988
Exam Location: Honolulu
Date: FEB 89
Deficiencies:
1. Open stairways.
2. Steps in main vertical zone.
3. Service spaces opening into stairtower.
4. Glass bulkhead.

CG Action
1. Enclosed stairtower.
2. Redefined main vertical zones.
3. Required openings into stairtowers to be closed off.
4. Required installation of sprinkler system.

Vessel: M/V VERA CRUZ I(Panama)
Operator: Bermuda Star Line
Classification Society: Bureau Veritas
Built: 1957
Exam Location: Tampa
Date: AUG 89
Deficiencies:
1. Fixed fire extinguishing system (CO_2) 40% discharged.
2. Structural fire protection issues.

CG Action
1. Intervened under Reg. 19, required system repairs.
2. Vessel is presently moored & out of service pending sale.

Vessel: M/V EMERALD PRINCESS (Panama)
Operator: Fernandina Cruise Lines, Inc.
Classification Society: ABS
Built: 1971
Exam Location: Jacksonville
Date: plan review JUN 89
Deficiencies:
1. No main vertical zones.
2. Open stairway.
3. Wood construction materials.

CG Action
1. Required structural modifications prior to operation in U.S.

Vessel: M/V BERMUDA STAR (Panama)
Operator: Bermuda Star Line, Inc.
Classification Society: Lloyds
Built: 1972
Exam Location: San Diego
Date: NOV 89 and FEB 90
Deficiencies:
1. Wasted boiler foundations, substantail machinery/electrical problems.
2. Structural fire protection, combustible insulation on ventilation system.

CG Action
1. Intervention under Reg. 19.
2. Required plan for insulation changeout.

Vessel: M/V QUEEN OF BERMUDA (Panama)
Operator: Bermuda Star Line, Inc.
Classification Society: ABS
Built: 1958
Exam Location: New Orleans
Date: JAN 90
Deficiencies:
1. Combustible insulation on ventilation system.

CG Action
1. Prior to issuance next Certificate of Compliance, submit plan for insulation replacement.

Vessel: M/V OCEAN SPIRIT (Bahamas)
Operator: Ocean Cruise Lines, Inc.
Classification Society: Bureau Veritas
Built: 1965
Exam Location: Tampa
Date: MAR 90
Deficiencies:
1. Fire screen doors inoperable.
2. Open stairways.
3. Maintenance/housekeeping.

CG Action
1. Required repair to fire doors.
2. Required enclosed stairtowers.
3. MSO detained under SOLAS, Chapter I, Regulation 19.

Vessel: M/V MERIDIAN (Bahamas)
Operator: Chandris Fantasy Cruise
Classification Society: ABS
Built: 1963
Exam Location: Miami
Date: MAR 90
Deficiencies:
1. Flag state plan approval without review.
2. Openings into stairtowers.
3. Conversion of spaces without refitting fire protection.
4. Glass bulkhead.

CG Action
1. Sought interpretations of existing areas.
2. Required roving fire patrols until openings into stairtowers (new areas) are closed off.
3. Required fire protection for overted berthing space.
4. Accepted glass bulkhead with sprinkler since not mainn vertical zone bulkhead.

Vessel: M/V SOVEREIGN OF THE SEAS (Norway)
Operator: Royal Caribbean Cruise Line
Classification Society: DNV
Built: 1987
Exam Location: Plan review prior to arrival at
Miami
Date: Jan 88, note this action occured during 1988, but is significant because of atrium determination.
Deficiencies:
1. Atrium design/structural fire protection interpretations.
2. Large steps (20 meters) in main vertical zone boundaries.
3. Openings into stairtowers.
4. Draft stops in overhead.

CG Action
1. Sought interpretations from flag Administration and classification society.
2. Accepted total flooding Halon system for galley and fire detection systemin public areas.
3. Required roving fire patrols until modifications made.
4. Required openings into stairtowers to be closed off.
5. Required automatic sprinkler system for atrium.

SENATOR LAUTENBERG: How do their records compare to other U.S. and foreign flag vessels? (Include comparative data on violations by type and flag.) Are there companies or vessels that could be described as "bad actors?" (Include data on each company operating a fleet in U.S. waters showing a 5 year record of violations.) If so how do you deal with them?

ANSWER: The list of port state control actions provided in response to the previous question is an indication of typical problems experienced with foreign flag passenger vessels. However, a list of violations by type and flag does not facilitate a meaningful comparison. The difference between U.S. and foreign flag passenger vessels with respect to specific technical requirements, levels of detail, significantly different reporting formats, and a wide range of discrepancy types makes such a comparison very difficult. Another factor that minimizes statistical significance is the relative fleet (sample) sizes. There are only two (2) U.S. flag cruise ships in operation today, versus approximately 100 times that number of foreign flag cruise ships.

The two U.S. flag vessels can, and do, receive violations for failure to meet standards which, in some cases, differ from those applied to foreign vessels. Foreign flag standards are based primarily on the International Convention on Safety of Life at Sea (SOLAS), although some U.S. laws are also applicable. Violation reports are generally not issued when a foreign flag vessel does not meet SOLAS standards. The foreign flag country receives a report of port state control actions notifying them of the discrepancies. Regardless of nationality, a vessel that has safety discrepancies will not be allowed to embark passengers in any U.S. port.

The Marine Safety Information System (MSIS) is used to record discrepancies and is consulted prior to control verification examinations. This MSIS data base is accessible by all Coast Guard Marine Safety Offices and enables them to easily obtain the inspection histories.

Some foreign flag passenger vessel operators have poorer track records than others. We examine them all on a scheduled basis. Vessels with a record of problems are carefully examined to ensure that problems do not recur.

"Sea Escape" vessels have had a history of fire safety and operational readiness problems. Vessels with such histories or with inspection notes in the MSIS data base are given closer scrutiny during the annual and quarterly control verification examinations. The Coast Guard Marine Safety Office in Miami, Florida, (the home base of operations for Sea Escape), is well aware of this and takes appropriate steps during examinations to ensure compliance. They work closely with management to make improvements.

We have worked diligently with Sea Escape management and it appears there is now a better understanding of the owner's responsibilities. This is a key to the safe operation of any vessel. Proper operation and maintenance by owners, an adequate level of oversight by the flag state, and the recommendations of the classification societies attending the vessel are essential. We are working with owners and other administrations to improve these areas. Another area receiving increased attention is an effort to improve the crew's ability to perform fire and boat drills and to communicate effectively with passengers in an emergency.

A meeting was recently held at Coast Guard Headquarters with an industry group representing 16 cruise ship operators to discuss these very issues. As a group, they were very cooperative and supportive of Coast Guard efforts. These topics will also be major items of discussion at the upcoming meeting of the IMO Fire Protection Subcommittee in July of this year.

SENATOR LAUTENBERG: In recent testimony on cruise ship safety before the sub-committee on Merchant Marine of the Committee on Merchant Marine and Fisheries, three new Coast Guard initiatives were identified:

- overseas inspections of foreign passenger vessels;
- investigation of casualties on passenger vessels occurring outside U.S. waters;
- and a program of randomly augmenting inspections verifying compliance with the international Safety of Life at Sea (SOLAS) treaty.

Why is there no request for additional resources to conduct these important programs?

ANSWER: At present, United States law does not provide for the inspection of foreign passenger vessels or the investigation of casualties, except in U.S. waters. However, international conventions (e.g. SOLAS, IMO) do contain provisions that allow for a number of examinations and investigations. 46 USC currently provides for the recovery of costs expended on the overseas inspection of U.S. documented vessels only. A legislative initiative to modify this limitation is presently under consideration within the Coast Guard.

U.S. law does provide for investigation of vessel casualties occurring within or threatening U.S. waters, but U.S. investigation of foreign vessel casualties occurring on the high seas is not specifically provided for. Although we have had no objections from major flag administrations for Coast Guard participation in such foreign vessel casualty investigations, practical U.S. participation has been low due to manpower.

Random augmentation for SOLAS verification is a program already in place. This augmentation of field inspection offices by Headquarters' technical personnel has been done from within existing resources. This has been necessary since the Coast Guard has a limited base of the requisite technical knowledge. The deployment of Coast Guard personnel who have expertise on fire protection design and evaluation has been particularly successful in identifying long standing deviations from the SOLAS treaty.

SENATOR LAUTENBERG: What is the state of marine fire fighting capability in the Coast Guard? Among our nation's professional fire fighters? Is there sufficient equipment in our nation's ports for marine fire fighting? If not, what are the shortfalls? Describe Coast Guard and other federal programs in marine fire fighting.

ANSWER: Marine fire fighting is the responsibility of local authorities. The Coast Guard will continue to provide assistance as available to local fire response units; the Coast Guard works closely with municipal fire departments, vessel and facility owners and operators, and mutual aid groups. Our major role is the development and coordination of vessel fire contingency plans for ports. These plans identify the response capability and responsibility within a port area.

The National Fire Protection Association, in cooperation with the Coast Guard, has developed a guide for land-based fire fighters who respond to marine vessel fires (NFPA 1405, effective February 5, 1990). The guide was specifically designed to assist land-based fire fighters in determining what resources and training are needed to properly respond to a vessel fire. It is too early to assess its impact on fire response readiness; however, informal feedback from potential users reveals a positive effect.

We cannot accurately assess the state of marine fire fighting capability in our ports, since this responsibility is that of local municipalities. However, by virtue of the interest shown by NFPA in developing NFPA 1405, it appears that there is a nationwide desire to improve the current capabilities of marine fire fighting.

The Coast Guard works closely with other federal agencies within a port during any major incident. Resources of the Navy, Army, and the Maritime Administration, are routinely referenced in the Coast Guard's Vessel Fire Fighting Contingency Plans, and utilized during coordinated responses.

FISHING VESSEL SAFETY

SENATOR LAUTENBERG: The Coast Guard has been charged with implementing the Fishing Vessel Safety Act. Congress directed the Coast Guard to develop and implement safety equipment regulations, prepare a licensing plan, maintain casualty statistics, and determine the need for a fishing vessel inspection program. Your FY 1991 budget requests $1.5 million and 18 FTE to assist and encourage compliance with the proposed regulations...What is the status/schedule of these regulations?

ANSWER: A Notice of Proposed Rulemaking for regulations to implement the Commercial Fishing Industry Vessel Safety Act of 1988 (Act) was published in the Federal Register on April 19, 1990. This NPRM proposes regulations for the design, safety equipment, stability, and operation of all commercial fishing industry vessels. The NPRM proposes regulations which follow the provisions of the act closely, as well as incorporating suggestions from Coast Guard District Safety Coordinators and the Commercial Fishing Industry Vessel Advisory Committee. The NPRM is open for public comment until August 20, 1990 (120 day comment period.) Public hearings on the NPRM will be held in approximately 12 locations in July and August. After the comment period closes, a final rule will be developed, considering comment letters and oral arguments presented at the public hearings. It is anticipated that the final rule will be published in late 1990 with an effective date in early 1991.

SENATOR LAUTENBERG: How will the money and personnel be employed? Will these personnel be full or part time?

ANSWER: The Coast Guard has requested $1.5 million to begin implementation of the Commercial Fishing Vessel Safety Act (the "Act") Regulations. $1,110,000 of the request will be used to fund 18 new, full time personnel. Eight of these people will be Fishing Vessel Safety Coordinators (FVSCs) assigned to the 1st, 5th, 7th, 8th, 11th, 13th, 14th and 17th Coast Guard District Offices. One assistant FVSC will be assigned to the 1st, 8th, and 11th Districts. Two assistant FVSCs each will be assigned to the 13th, and 17th Districts. The duties of the FVSCs in the 2nd and 9th Districts will be done on a part time basis by an officer already assigned due to the minimal commercial fishing activity within each District. The FVSCs will initiate the program in their districts through education and training on the uniform application of the fishing vessel safety regulations currently under development. Once regulations are in place for the fishing industry, Coast Guard efforts will focus on compliance. The FVSCs will coordinate that effort, which will impose additional workload at the field unit level. Three of the 18 personnel will be assigned to Coast Guard Headquarters in Washington. They will provide technical support and oversight for program implementation, and regulation development/management.

The remaining $390,000 will fund educational material (pamphlets and newspaper/magazine ads) and travel expenses (expositions, conventions and meetings) for the FVSCs so that they may reach and educate the fishermen on the upcoming rules, provide Coast Guard sponsored classes, and assist in private training school programs. FVSCs will also assist the National Academy of Sciences Marine Board with the ongoing inspection and licensing plan study.

This funding is just for the first phase (education and training) of the developing fishing vessel safety program. These funds will be needed to get the "word out" to the owner/operators of the 130,000 plus commercial fishing vessels. Implementation of these regulations is a new initiative for the Coast Guard and the commercial fishing industry. This is the first time this industry has had to comply with any safety regulations other than the basic safety provisions (e.g., lights, personal flotations devices, etc.) applicable to all vessels.

SENATOR LAUTENBERG: What is the status/schedule of the licensing plan?

ANSWER: The Commercial Fishing Industry Vessel Safety Act of 1988 requires that the Coast Guard prepare and submit to the Congress a plan for the licensing of operators by September 9, 1990.

To date, the Coast Guard has worked closely with the Commercial Fishing Industry Vessel Safety Advisory Committee to identify licensing needs and alternatives. It has researched available fishing vessel casualty statistics, the fishing vessel licensing programs of other countries, past Coast Guard studies, and recommended international standards. Public comment on the licensing issue has been invited through published FEDERAL REGISTER announcements. Additional public comment is anticipated through a series of public hearings in the July - August time frame. Alternatives are being evaluated for effectiveness and associated costs; and desired legislation is being considered. The Coast Guard is required to submit a report to Congress in September, 1990, on this aspect of the Safety Act.

SENATOR LAUTENBERG: Are casualty statistics for fishing vessels being maintained? How do casualty rates compare against other inspected vessels? Are regulations crafted to bring the casualty rates down to a pre-determined level?

ANSWER: The Coast Guard has maintained a data base of reportable marine casualties, including fishing vessels, since 1963. Statistical summaries of these data are published annually in the PROCEEDINGS OF THE MARINE SAFETY COUNCIL.

Without adjusting for fleet size variations between 1981 and 1988, the casualty rate for documented fishing vessel total losses varied between 5.1 and 8.4 casualties per 1000 vessels, averaging 7.3. The casualty rate for non-barge, inspected vessel total losses ranged between 1.5 and 4.0 casualties per 1000 vessels, averaging 3.1. These values do not include casualties which do not result in total loss of the vessel or casualties involving state registered commercial fishing vessels which account for over 100,000 full and part time commercial fishing vessels. Therefore, the figures above are considered to be conservative.

The Commercial Fishing Industry Vessel Safety Act of 1988 requires the Coast Guard to compile statistics concerning data from insurers of commercial fishing industry vessels. It also authorizes acceptance of qualified third parties to perform this function. A notice was published in the Federal Register on May 24, 1990, that the Coast Guard intends to recognize the Marine Index Bureau (MIB) as a qualified third party for compilation of casualty information concerning commercial fishing industry vessels. While reporting to the MIB is not yet required, the Coast Guard is encouraging insurers to voluntarily report casualty data concerning commercial fishing industry vessels and personnel injuries on such vessels to the MIB. The regulations which would require reporting to the MIB are contained in the Notice of Proposed Rulemaking published in the Federal Register on April 19, 1990. These rules are expected to become final in late 1990.

Due to the complex and largely uncontrolled and variable interrelationships in the commercial fishing industry, regulations cannot be crafted to reduce casualty rates to predetermined levels. However, analysis of casualty information permits the causes and nature of casualties to be identified. The regulations can then address those areas and reasons for casualties. This is standard practice for Coast Guard vessel regulations.

SENATOR LAUTENBERG: What measures of effectiveness were considered in crafting the inspection, training, licensing and enforcement programs?

ANSWER: The effectiveness of licensing, training, inspection, and enforcement can only be roughly measured by detailed analysis of casualty data. Heretofore, these data have been incomplete and of limited use. Future data should better, but still will not provide a truly complete measure of effectiveness.

In developing regulations for commercial fishing industry vessels, The Coast Guard considered the following: the authority of the Commercial Fishing Industry Vessel Safety Act of 1988 (Act); Coast Guard resources available for enforcement; input from the Commercial Fishing Industry Vessel Safety Advisory Committee; and the impact of the regulations on the industry. The Act specifies the regulations the Coast Guard is to develop, but, under the Act, these vessels will continue to be uninspected. The Act requires the Secretary of Transportation to prepare a licensing plan and to study the inspection issue. The licensing plan will address the question of ensuring competence for operators of documented vessels. The inspection study will address the safety problems and make recommendations for addressing those problems. We expect to complete these and report to Congress in September 1990.

Training for operators of commercial fishing industry vessels may be dealt with in two ways. First, the licensing plan could include required training. Second, requirements for training in emergency procedures, first aid, and CPR are contained in the Notice of Proposed Rulemaking published in the Federal Register on April 19, 1990.

The objective of the vessel operator licensing plan is to create a system for ensuring that mariners are competent to safely operate fishing industry vessels. Analysis of macro casualty statistics and input from industry experts are used to identify what skills the mariner should possess. A system is then developed to verify that only mariners meeting minimum competency standards engage in this activity.

The enforcement program will initially focus on educational and awareness efforts to encourage compliance with the regulations and higher safety standards. Because the Coast Guard lacks the resources to begin a specific enforcement program on the 133,000+ state and federal registered vessels subject to the Act, this is seen as the most effective means of improving safety. However, inspections will be conducted incident to routine vessel boardings for fisheries, search and rescue, and drug interdiction. Coast Guard District Safety Coordinators will also work with key contacts in the industry to organize formal training seminars and workshops for industry representatives.

SENATOR LAUTENBERG: Are we to assume that your request for personnel dollars for a program to "encourage compliance" suggests that an inspection program is unwarranted? Please explain.

ANSWER: The Coast Guard is studying the need for an inspection program. The Commercial Fishing Industry Vessel Safety Act of 1988 (Act) requires the Coast Guard, in conjunction with the National Academy of Engineering, to conduct a study of safety problems on fishing industry vessels and to make recommendations to Congress as to whether a vessel inspection program should be implemented and if so, the nature and scope of that inspection. The National Academy of Engineering is expected to finish their portion of the inspection study in June 1990. The Coast Guard expects to complete the final inspection study and report to Congress in September 1990. Additional Congressional authorization would be necessary for inspection of commercial fishing industry vessels.

Until the Coast Guard determines the need and has the authority and resources to administer an inspection program for commercial fishing industry vessels, it is felt that the most cost effective way to implement the Act is through encouraging voluntary compliance with safety regulations and educating the industry on the benefits of safe operations. The Coast Guard is taking a number of steps to achieve this end.

1. Full time fishing vessel safety coordinators will be assigned in each Coast Guard District that has a significant fishing vessel population. Coordinators will be assigned in the Boston, MA; Portsmouth, VA; Miami, FL; New Orleans, LA; Long Beach, CA; Seattle, WA; Juneau, AK; and Honolulu, HI.

2. The Coast Guard has had initial discussions with the National Association of Marine Surveyors (NAMS) to establish a program whereby NAMS will survey fishing vessels to determine compliance with the fishing vessel safety regulations authorized by the Act. NAMS would issue a window sticker for vessels complying. This will assist in achieving compliance.

3. The Coast Guard will be working closely with the fishing vessel educational community to develop training programs to assist fishing vessel personnel in understanding the safety issues involved in fishing and educating them in the use of the required safety equipment. The Coast Guard and the Maritime Administration are working cooperatively to improve the capabilities of local institutions to provide this service. This is consistent with MARAD's mandate to support training for the U.S. merchant marine.

4. Coast Guard District Fishing Vessel Safety Coordinators will work with key members of the industry to sponsor workshops and safety seminars to increase the safety awareness of the commercial fishing industry.

The Coast Guard will continue to conduct safety inspections during routine boarding operations incident to law enforcement activities and search and rescue cases. The standard boarding forms are being revised to incorporate provisions of the Act.

The Coast Guard continues to emphasize the benefits of the voluntary safety program for the commercial fishing industry. This program is explained in Commandant Instruction (COMDTINST) 16711.10, Commercial Fishing Vessel Safety Project. Navigation and Vessel Inspection Circular (NVIC) 5-86, Voluntary Standards for U.S. Uninspected Commercial Fishing Vessels, dated August 18, 1986, contains recommended safety standards for fishing vessels, addressing areas not covered in the Act or the proposed regulations.

OIL TANKERS

SENATOR LAUTENBERG: U.S. flagged oil tankers (excluding barges) comprise only a small fraction of ships transporting oil in U.S. waters (less than 15%). Many of these foreign tankers trade at East Coast ports, notably New York and New Jersey. Much attention has been paid this last year to vessels engaged in the Trans-Alaska Pipeline (TAPS) trade. What can you tell us about foreign tankers trading on the East Coast? Are these vessels experiencing similar welding and structural problems?

ANSWER: Coast Guard casualty records show very few fractures in the hull structures of foreign tankers operating in U.S. waters. However, unless a fracture is detectable in the external hull envelope by visual or circumstantial means, its presence may not be discovered until the vessel undergoes a thorough internal structural survey. These surveys are conducted under the authority of the flag Administration for vessels from nations party to the International Convention for the Safety of Life at Sea (SOLAS) 1974, as amended. Only in the case of vessels from non-SOLAS party nations would the Coast Guard perform internal structural surveys, in conjunction with a full inspection for certification. Presently, all foreign tankers calling at U.S. ports are from nations party to SOLAS.

The Coast Guard boards and examines each foreign tank vessel at least once a year to ensure that it meets all required navigation safety, port safety, and pollution prevention regulations. As part of this examination, the Coast Guard verifies that the periodic SOLAS structural and equipment surveys have been performed as required. However, details as to the number of structural fractures detected and corrected during those surveys are not required to be reported to the Coast Guard. Consequently, we have no basis for comparing welding and structural detail problems between U.S. and foreign tankers.

SENATOR LAUTENBERG: Does the Coast Guard inspect these foreign tankers in drydock? What assurances do we have that problems similar to TAPS trade vessels aren't lurking?

ANSWER: The Coast Guard does not examine foreign tankers on drydock. These vessels are rarely, if ever, drydocked in U.S. shipyards; examination by USCG inspectors would entail travel to overseas yards for this purpose. Although, Coast Guard inspectors routinely conduct overseas inspections on U.S. merchant ships, these are performed on a reimbursable basis (i.e, the operating companies reimburse the Coast Guard for all travel and per diem costs associated with the travel) as authorized by Title 46, U.S. Code, Section 3317. The statute is limited to vessels documented in the United States. An amendment to this statute would be required to authorize reimbursable travel for the purpose of examining foreign vessels in overseas locations. Such inspections would also require a substantial increase in personnel.

With the exception of the newly established Marine Inspection Detachment in London, the Coast Guard does not have any overseas inspection offices. Overseas inspections are primarily conducted by inspectors based at domestic marine safety units. The travel time involved in performing these inspections can be significant and results in a considerable expenditure of limited inspector resources. If foreign vessel examinations were to be performed overseas, additional personnel resources would be necessary.

Foreign vessels entering U.S. jurisdiction must be: (1) registered in a country that is party to the International Convention for the Safety of Life at Sea (SOLAS) 1974, as amended. Each tanker must have the appropriate certificates issued by its flag Administration attesting to its compliance with SOLAS construction and equipment standards; or (2) the vessel must undergo a full inspection for certification by the U.S. Coast Guard, including an extensive plan review and examination while on drydock. Satisfying either of these two criteria will ensure that the vessel is suitably constructed and that it must undergo periodic structural examinations. These examinations detect potential problems before they result in hazardous conditions for the vessel or environmental damage through oil outflows.

SENATOR LAUTENBERG: Compare and contrast casualty rates and violation of pollution prevention regulation rates between U.S. flagged tankers and foreign flagged tankers. Likewise, compare and contrast spill rates between U.S. and foreign flag tankers.

ANSWER: Approximately 80-85% of the tankers operating in waters under U.S. jurisdiction are registered in foreign countries. Foreign tankers account for roughly 60% of all casualties occurring in U.S. waters. Conversely, U.S. tankers (representing 15-20% of the tanker traffic in U.S. ports) experience approximately 40% of the casualties, a proportionately greater number. This seeming disparity can be explained by the greater frequency of U.S. port entries by a U.S. tanker, many of which are smaller than their foreign counterparts and which operate in the protected coastwise (Jones Act) trade. When all factors are taken into account, U.S. tankers pose no greater risk to U.S. port areas than do foreign tankers. This conclusion was reached in the Coast Guard's October 1989 Report of the Tanker Safety Study Group.

The following tabular breakdowns of oil tanker spill statistics for the five-year period (1985-89) provide background to support the above conclusions.

TANKSHIP PETROLEUM SPILLS IN COAST GUARD AREAS OF REPORTING RESPONSIBILITY (1985-1989)

FLAG	1985	1986	1987	1988	1989	TOTAL
U.S.	70	96	89	110	81	446
FOREIGN	122	123	104	155	183	687
TOTAL	192	219	193	265	264	1133

AMOUNT OF PETROLEUM SPILLED IN COAST GUARD AREAS OF REPORTING RESPONSIBILITY BY TANKSHIPS FOR YEARS, 1985-1989
(FIGURES IN GALLONS)

YEAR	U.S.	FOREIGN	YEARLY TOTAL
1985	242,702	489,687	732,389
1986	33,194	1,130,595	1,163,789
1987	1,549,506	98,123	1,647,629
1988	55,062	797,229	852,291
1989	10,593,102*	670,392	11,263,494
TOTAL	12,473,566	3,186,026	15,659,592

* INCLUDES EXXON VALDEZ SPILL ENTERED AS 10,500,000 GALS.

NUMBER OF POLLUTION PREVENTION VIOLATIONS INVOLVING TANKSHIP PETROLEUM SPILLS FOR YEARS 1985-1989

YEAR	US	FOREIGN	COMBINED TOTAL
1985	63	101	164
1986	101	149	250
1987	69	76	145
1988	103	192	295
1989	32	103	135
5 YR. TOTAL	368	621	989

SAFETY AND OCCUPATIONAL HEALTH

SENATOR LAUTENBERG: Coast Guard marine safety and marine environmental protection program personnel are exposed to a variety of health hazards in their inspection, enforcement and response activities. According to the Coast Guard, OSHA and DOT have cited your existing safety and occupational health program as being inadequate. Describe the existing program and its shortfalls.

ANSWER: The major shortfall with the existing program is the insufficient number of trained safety, environmental and occupational health specialists. Current field staff are only able to provide 41% of the support mandated by OSHA regulation. The Coast Guard has recently embarked on a pro-active Safety and Occupational Health (SOH) program reprogramming some existing billets in 1989, and procuring 4 additional billets in the FY90 budget; the FY91 budget requests 34 positions. Unit level safety officers remain as the area most in need of additional resources with specific academic training and experience in the safety, environmental and occupational health disciplines.

The existing safety and occupational health program relies on a three tier approach; policy development, field oversight and technical support, and policy implementation. Policy is developed at Headquarters; field unit oversight and technical support is provided through limited resources at the two maintenance and logistics commands (one on each coast); and policy is implemented at units by personnel assigned to that function on a part-time (collateral duty) basis.

Over the past two decades, an increasing number of safety and occupational health requirements have been imposed on field units with no increase in resources to implement them. Technical regulations such as chemical exposure and medical monitoring, chemical hazard communication, and hazardous waste management are increasingly difficult for part time personnel to address. In addition, Coast Guard marine safety personnel are engaged in maritime inspection and monitoring activities involving the potential for exposure to approximately 1000 different chemicals shipped in bulk. To deal with chemical exposure questions more effectively, technically trained personnel have been assigned to Coast Guard district marine safety divisions. Their primary function is to provide assistance to units in implementing their safety and occupational health programs.

SENATOR LAUTENBERG: Will the resources requested in the FY 1991 Budget Estimate be sufficient to maintain an effective program?

ANSWER: The FY 1991 budget request will provide full-time field personnel to administer the safety and occupational health programs at the larger marine safety offices but does not address similar problems in other Coast Guard mission areas. Our plan is to request additional field unit resources in future years.

SENATOR LAUTENBERG: Describe the program given the additional resources.

ANSWER: The additional resources will allow us to provide full-time safety and occupational health officers at moderate to large sized marine safety offices where the potential for chemical exposure is greatest.

SENATOR LAUTENBERG: What qualifications in occupational safety and health will these new personnel be required to have?

ANSWER: The requested personnel will be used primarily as full-time program administrators. They will be given in-house safety and health program administration training, as well as specialty training courses in occupational safety and health offered by NIOSH and OSHA. Once trained, the new personnel will have a knowledge of OSHA regulations and standards and will be able to identify and evaluate routine safety and health hazards at units.

SENATOR LAUTENBERG: What training does the average marine inspector or port safety or pollution responder receive?

ANSWER: The average marine inspector receives basic chemical hazard awareness training as an integral part of regular mission performance training. Environmental response personnel receive additional training in Federal rules and regulations governing the transportation of hazardous wastes and emergency chemical spill response and mitigation. Specific chemical hazard awareness training is received at the individual units based on local needs.

SENATOR LAUTENBERG: How will this program reduce the "excess mortality among" Coast Guardsmen? Will there be a follow-on study of mortality and disease rates? Has DOT, OSHA and the agencies within the Department of Labor and/or the Public Health Service reviewed your expanding program?

ANSWER: The National Cancer Institute has established a standard called "Excess Mortality Rate (due to potential chemical exposures among marine safety personnel)." This standard compares the rate/cause of death among Coast Guard marine safety personnel compared to Coast Guard personnel whose duties do not require exposure to chemicals, and establishes a norm. The study leading to the standard determined that there is a substantial difference between the two different groups, apparently due to chemical exposure. The Coast Guard's expanding safety and occupational health program is expected to decrease this "excess mortality" among marine safety personnel through identification, evaluation and correction of unsafe and unhealthy conditions resulting in a reduction in associated illnesses, injuries and premature deaths. These programs are also intended to meet mandatory OSHA standards.

No follow-on study of Coast Guard specific mortality and disease rates is planned. Follow-on studies have been attempted at great expense in the past without significantly improving the information or knowledge base over that developed by OSHA. Although there is no ongoing analysis or additional epidemiological data being collected, we will continue to internally monitor injury/illness data to evaluate the program's effectiveness.

Our Safety and Occupational Health (SOH) program expansion has not been reviewed by OSHA. We have worked with the Office of the Secretary of Transportation in developing the Coast Guard's 1991 SOH budget submission. They have scheduled an evaluation of the Coast Guard safety and occupational health program for August 1990.

SAFETY REVIEW TASK FORCE

SENATOR LAUTENBERG: The Office of the Secretary of Transportation conducted a review of Coast Guard safety programs. Their findings were published in June, 1988 with specific recommendations for improvements to various programs and activities. Provide an update on actions taken on each recommendation.

ANSWER: The task force recommendations, by program activity, are listed in boldface print. An update of the actions taken are provided in normal print immediately following each recommendation.

Marine Inspection (MI) Program:

Recommendation MI1. The Coast Guard should develop improved measures for analyzing the effectiveness of the several elements of the commercial vessel safety program. The measures should provide a more direct link between program elements and prevention of death, injury and property damage. For example, the Coast Guard should use the data collected in the course of certificating and inspecting vessels to set realistic productivity standards and to focus the work of inspectors in preventing and correcting design, construction and maintenance deficiencies.

The recommendation identifies a need for program-wide resource use analysis. We have completed a project to compare casualty rates as a function of vessel type, casualty cause, and resource hours expended to prevent these casualties among the many vessel types regulated by the Coast Guard. The results of these comparisons may provide a mechanism for setting productivity standards that will focus the work of inspectors in preventing and correcting design, construction and maintenance deficiencies.

An analysis of resource use for each type of vessel and each type of inspection activity is complete. The data can be reported in specific formats to answer a wide range of questions. An analysis of the relative risk of death and economic loss by vessel class and casualty type is also complete. However, to properly assess risk we must first study a vessel's exposure to risk. We are building a data base that will factor in the "exposure risks" of each vessel type by area, time of year and operating frequency. We expect this phase of the project to be completed mid-1990. A comparison of the figures and a determination of what changes, if any, are indicated, will begin shortly thereafter.

Recommendation MI2. The Coast Guard should analyze data from inspections and casualty investigations and use the results to better focus inspectors in preventing, uncovering and correcting deficiencies.

An analysis to estimate risk levels for various commercial vessel types and various casualty natures using deaths and dollar damage as measurements has been completed. We are currently building additional databases to evaluate domestic and foreign trade exposure data. A comparison of analytical results to determine appropriate actions will follow compilation of the various data elements.

Recommendation MI3. The Coast Guard should formally evaluate the effectiveness of voluntary vessel standards and crew safety programs in the U. S. fishing industry within a year. It should also actively promote the voluntary initiative to additional commercial and educational groups.

Commandant Instruction 16711.10 dated 6 November 1987 implemented the Coast Guard's plan to evaluate the effectiveness of the voluntary vessel standards and crew safety programs. The evaluation report concluded that effectiveness of the voluntary program could be determined only after a number of years. The evaluation will be more difficult now, given the passage of the Commercial Fishing Industry Vessel Safety Act of 1988 (The Act). However, we are continuing efforts under the voluntary program with respect to educational institutions, trade shows and promoting voluntary standards.

In addition to general promotion at trade shows and through local industry newsletters, we are working with insurance organizations and owners' cooperatives to publicize and encourage use of the voluntary guidelines. The voluntary initiative is being actively promoted through fishing industry groups, such as the North Pacific Fishing Vessel Owner's Association. We are working with Texas A&M University to develop a Gulf Coast Fishing Vessel Safety Manual and with the Massachusetts Maritime Academy to develop training programs through their Fishing Vessel Safety Training Center.

The voluntary program complements the Act, and together they form a comprehensive effort to improve fishing vessel safety. The Act requires various amounts of safety equipment depending on size, route and number of persons on board. It mandates operating stability requirements on vessels built after 1989. A licensing plan and an inspection study must be developed and conducted with the results submitted to Congress in 1990. The inspection study is being conducted by the National Research Council (Marine Board) through the National Academy of Engineering. The third meeting of the assessment committee was held 24 - 26 March 1990.

The Act required establishment of a 17 member Fishing Industry Vessel Advisory Committee (FIVAC). The Secretary of Transportation approved the appointments of the 17 members on 15 March 1989. The FIVAC has met four times to date.

An Advanced Notice of Proposed Rulemaking, for the regulations required by the Act, was published in the Federal Register on 29 December 1988. We envision publishing final rules in late 1990.

Recommendation MI4. The Coast Guard should expedite revision of its regulations to ensure that the safety standards applicable to T-boats are commensurate with the number of passengers carried.

The small passenger vessel (T-Boat) regulations were developed primarily for small party fishing vessels, tow boats and ferries. Over time, new types of vessels and vessel operations have been developed. Examples include vastly increased vessel size and number of passengers, operations in the offshore oil industry, dinner cruises, and commercially viable passenger carrying submersibles. Updates to the regulations involve changes such as:

-additional requirements for inflatable survival craft
-new requirements governing fixed fire fighting equipment
-improved structural fire protection for large vessels
-more appropriate stability standards
-revised dry docking intervals.

A Notice of Proposed Rulemaking was published in the Federal Register of January 30, 1989. Six public hearings were held. Significant changes are expected to be made to the proposed rules. As a result, a Supplementary Notice of Proposed Rulemaking will be published in the fall of 1990. We anticipate publishing a final rule in 1991.

Port Safety and Security (PSS) Program:

Recommendation PSS1. The Coast Guard and the Research and Special Programs Administration should establish and coordinate a Departmental inspection program to reduce the number and severity of hazardous materials violations occurring in containerized cargo shipping. The program should focus on shipping intermediaries known as Non-Vessel Operating Common Carriers (NVOCCs) and other shippers with a history of hazardous materials violations. The inspection effort should have two elements:

a. The Coast Guard should target containers located dockside; and

b. The Research and Special Programs Administration should coordinate with the Federal Highway Administration and the Federal Railroad Administration to inspect NVOCCs and shippers where their containers are packed or offered for transportation.

The Coast Guard and the Research and Special Programs Administration should regularly exchange information on their findings in order to identify and target violators.

We are continuing coordination of inspection activities with the Office of Hazardous Materials Transportation (OHMT) and Customs to develop solutions to our mutual inspection problems. A Coast Guard/Customs Memorandum of Understanding (MOU) was signed and took effect on 24 January 1989. A Commandant Instruction is in final draft and will be published to furnish guidance to CG field units in conducting container inspections. The guidelines are to be based on the CG/Customs MOU and on the experience gained in our Los Angeles/Long Beach area container inspection program.

Recommendation PSS2. The Coast Guard should expeditiously update 33 CFR 126 relating to hazardous materials transfer and storage on waterfront facilities to make these regulations responsive to today's port environment, design and needs. The update should provide for honoring local oversight processes where the Coast Guard can ascertain that such local review meets or exceeds Coast Guard requirements.

Liquified Natural Gas (LNG) Terminal Regulations were published in February 1988. The Supplemental Notice of Proposed Rulemaking to consolidate bulk liquid terminal regulations by relocating 33 CFR 126 "Safety Requirements" for bulk liquid terminals to 33 CFR 154 were published 9 June 1989. Final rules are in clearance routing for publication in the Federal Register. After completion of a contractor's study, a Notice of Proposed Rulemaking for Liquified Hazardous Gas Terminal Regulations should be published in August 1990. The Advanced Notice of Proposed Rulemaking for Container, Break-bulk, Bulk-Solid Terminal Regulations has been delayed due to personnel and funding shortfalls.

Recommendation PSS3. The Coast Guard should provide centralized oversight of its civil penalty proceedings. This oversight should include compiling nationwide statistics as well as analyzing trends in the nature of violations and their disposition. In addition, the Coast Guard should develop profiles of violators and where and how often violations are occurring.

Authority for oversight, management and control of the entire civil penalty process was delegated to the Office of the Chief Counsel and is the responsibility of the Maritime and International Law Division (G-LMI).

G-LMI formed an oversight working group with representation from all operating and support program managers involved in the civil penalty process. The working group concluded that the Marine Safety Information System (MSIS), with modifications, will be an adequate system to facilitate implementation of this recommendation. Based upon Operating Program management information needs, enforcement goals, and MSIS capabilities, a systems analysis of MSIS was performed to assess what additional capabilities are needed, the cost of obtaining these capabilities, the effects upon the host computer of expanding the user community, and the resource requirements to implement identified changes. In the interim, limited MSIS capabilities have been extended to all of the Hearing Officer locations and to the collections authority at the Pacific Area Maintenance and Logistics Command.

Design proposals have been completed for further expansion and refinement of MSIS to support civil penalty enhancement. Eventually, case tracking services will extend from detection to collection. Implementation of the redesign project pends additional funding support.

The Coast Guard now participates in the Internal Revenue Service Income Tax Withholding Offset program and uses this as a tool for collection of civil penalties. Additional efforts are underway to initiate legislation to allow the Office of Marine Safety, Security and Environmental Protection, Merchant Vessel Inspection and Documentation Division (G-MVI) to withhold or revoke vessel documentation for vessel owners who have not paid civil penalties.

Recreational Boating Safety (RBS) Program:

Recommendation RBS1. The Coast Guard should target additional inspectors to visit boat builders with a history of safety violations and reduce its factory visits to boat builders with good safety records. The Coast Guard should train and use qualified Auxiliarists to augment Coast Guard personnel on visits to established boat builders with good safety records.

Factory inspections are conducted under a program begun in 1988, by Coast Guard personnel from our Marine Safety and Marine Inspection Offices. The effectiveness and adequacy of this program are still under evaluation. Based on inspection data collected over the last two years we intend to streamline inspection strategies and stratify inspection target goals. Including Auxiliarists in the factory inspection program is difficult for training and scheduling (weekend availability) reasons. In addition, we have not used civilian volunteers in any of our law enforcement missions, viewing those responsibilities as inherently governmental.

Recommendation RBS2. The Coast Guard should take a more active role in ensuring that boating safety grant funds are used more effectively. This would include:

a. having District personnel review and comment on state programs and offer technical and policy assistance in their preparation;

b. evaluating state boating programs to determine the relative merits of the different elements of each state's programs;

c. preparing an annual report on why projects were selected, how discretionary funds were spent, and the status of projects.

We have hired four additional grant administration personnel. They will visit states in their assigned regions to provide program review and assistance. The DOT Inspector General will audit selected state programs. Six audits have been conducted to date. A Memorandum of Understanding with the Department of Interior's Fish and Wildlife Service provides for assistance in oversight of public access site projects. Two new categories for reporting state expenditures have been added. Analytical comparisons are being made for each function, by state. All of these efforts will greatly improve evaluations of state boating safety programs. An annual report on the national nonprofit public service organization program will be prepared each April.

Recommendation RBS3. The Coast Guard should evaluate the current apportionment formula to determine whether current factors equitably distribute funds and whether Federal funding is targeted towards areas of significant boating safety concern.

We will continue to discuss alternative formulas with State Boating Law Administrators at regional meetings of the National Association of State Boating Law Administrators (NASBLA). We developed and presented an alternate formula at the annual NASBLA meeting in the fall of 1989. However, NASBLA does not agree we should change the current formula. NASBLA concerns are being considered and alternative legislative proposals and strategies are being developed.

Recommendation RBS4. The Coast Guard should synthesize and periodically publish a digest of State educational activities, contacts, promotional tools, and other efforts to educate the public regarding safe boating techniques. This informations should be available to all interested parties, particularly State, local, and private organizations with boating safety interests.

We recently increased the size of our recreational boating safety program staff to place renewed emphasis on boater education. The Coast Guard will continue to serve as a clearinghouse for the review of boating safety education programs, including responding to requests for educational information and materials.

Recommendation RBS5. The Coast Guard should reinstate Boating Safety Detachments (BOSDETS) using auxiliarists. The BOSDETS should operate in marinas and areas of high boat concentration to provide safety and operating instruction to boaters, to demonstrate the use of safety equipment, and to provide information about the effects of operating boats under the influence of drugs and alcohol.

We do not have the facilities or operating funds to reestablish the BOSDETS, and the States now assume much of the work previously performed by those units. We have expanded Coast Guard policy to foster greater Auxiliary, Coast Guard Regular, and Reserve interaction in implementation of the field boating safety programs. A letter was sent to field flag officers promoting increased use and involvement of Coast Guard Auxiliarists in operations and training.

Opportunities, requirements and barriers regarding greater use of the Auxiliary are a continuing topic of discussion at Auxiliary conferences, flag officer conferences and Operations Coordinating Council meetings.

Recommendation RBS6. The Coast Guard should expand the Marine Dealer Visitation Program. Auxiliarists should increase the number of visits to marine boats and equipment dealers and intensify their effort in delivering brochures and other boating safety information to dealers and their customers.

This program is currently underway. Policy guidance was developed and provided to Coast Guard field units and the Auxiliary. A report on the success of the program was provided to the Department of Transportation in July 1989.

Recommendation RBS7. The Coast Guard should develop and submit to the Secretary an analysis of which existing program activities and new options have the greatest impact on reducing recreational boating fatalities. The "best buy" analysis should include an examination of options, costs of implementing options, and the potential benefits associated with each option. The analyses should consider increased use of the Auxiliary to supplement or replace current Coast Guard activities associated with low risk safety problems.

The fact that the recreational boating fatality rate is at a record low is a good indication of the cumulative success of all Federal, State and local efforts. Collecting and analyzing data for this specific recommendation has been difficult since there are numerous sources and they do not maintain data consistently. In addition, the impacts of some aspects, such as education, are not easily quantified. However, the Coast Guard is conducting an in-depth review of existing planning documents to identify and describe additional options to accomplish major RBS program activities, including greater use of the Coast Guard Auxiliary. We are also conducting separate evaluations of our State and regulatory programs.

A nationwide boating survey, conducted by the American Red Cross, was completed in April 1990. The survey contains good information on the numbers and types of boats in use and their distribution. Other data needs are being assessed.

Search and Rescue (SAR) Program:

Recommendation SAR1. The Coast Guard should develop performance indicators that better measure its effectiveness in saving lives. These indicators should distinguish between emergency and more routine distress calls and between different environmental conditions.

A study group was formed to develop additional performance indicators in accordance with Task Force recommendations. The group developed three specific formulas which incorporate various SAR data to measure the Coast Guard's efficiency and its ability to measure loss of life and loss of property. We expect to develop more specific measures of environmental, equipment and procedural effectiveness based on these performance indicators.

Recommendation SAR2. The Coast Guard should allocate its personnel and equipment resources in the field based on a

nationwide analysis of the nature and location of search and rescue incidents.

The problem is not that SAR resource reallocation isn't being done...quite the contrary. The problem is that major changes are not politically acceptable, as was the case in 1989 when nine stations closed the previous year were reopened.

In addition, the SAR program is dynamic in the location and platform mix relative to the seasonal cycles of SAR activity. The variances in activity are neither precise nor predictable enough for use at the micro-level and are not reflected in our statistics until mid-way through the following year's budget cycle. Consequently, our approach is not to model the whole nation but to do sub-regional simulations.

We normally conduct analyses of parts of the SAR system when our field commanders recognize changing environments or missions, or when we have some other cause to review them, such as major program budget cuts. When this occurs, we simulate the entire SAR system for a limited sub-region to test the effects that changing resource readiness status, locations and platform mixes would have on simulated response times and SAR effectiveness. Small resource adjustments are generally accommodated and made. But larger changes, even when already supported by voluminous SAR data, are difficult to effect.

SAR resource reallocation will continue and efforts will be made to ensure a proper balance, across the nation, in mission effectiveness and resource utilization efficiency. The study group formed to evaluate measures of effectiveness for recommendation SAR1 has included this recommendation in its' scope of work.

Recommendation SAR3. **The Coast Guard should analyze search and rescue data to identify trends and common safety problems that contributed to the need for a SAR distress call. The trends and general areas of concern should be communicated to other Coast Guard safety programs and used to prevent or reduce the need for emergency assistance in the future.**

While the Coast Guard is certainly proud of the progress it has made in this area, more can be done. One area with more potential is the Search and Rescue Management Information System (SARMIS). The SARMIS data is not sufficiently specific to allow detailed accident analysis that might be useful in identifying trends and common safety problems. The process to alter the data gathering system takes about a year and should be timed for implementation at the beginning of a new fiscal year. This keeps the nature of the annual data homogeneous, less prone to error, and more useful. Another initiative is an analysis of recreational and commercial vessel accidents using the State Marine Casualty Reporting System. Our Coast Guard Boating Safety Program collects recreational accident statistics reported, incident to 33 CFR 173-4, and publishes a summary document highlighting the types and causes of accidents. While this process captures nearly all fatal accidents, it records only about ten percent of non-fatal accidents...a possible serious omission. All commercial vessel accidents are reviewed by the Coast Guard Office of Marine Safety, Security and Environmental Protection.

Both of these systems have been effective in identifying preventative measures and in making actual SAR operations more effective (e.g., through enhanced survivability equipment, signalling devices and distress notification procedures).

A major goal of the Office of Navigation Safety and Waterway Services (G-N) is to synergize the impacts of the search and rescue and recreational boating safety programs and to enhance the transfer of information among the various staffs involved in maritime safety.

An analysis of search and rescue and boating accident data is being conducted to identify trends. The results of this analysis will be disseminated annually in the SAR Statistics publication. Program Managers will be informed separately of any trends identified in their program areas.

Recommendation SAR4. The Coast Guard should assess upgrading its Search and Rescue Satellite-Aided Tracking (SARSAT) ground stations network to assure that it can respond to emergency situations in a timely and cost-effective manner, especially in the western Pacific.

Funds for two SARSAT earth stations were appropriated in the FY 1990 budget. The National Oceanic and Atmospheric Administration will take over maintenance of the stations. The Coast Guard's role will shift to simply using the ground station data and sharing the interagency maintenance costs.

Short Range Aids to Navigation (SRA) Program:

Recommendation SRA1. The Coast Guard should make more use of the Waterways Analysis Management System (WAMS) as a management tool because it offers long term savings and efficiencies, and should require that WAMS analyses on high priority waterways be completed in a timely manner.

Districts are currently using WAMS to the fullest extent possible, given limited personnel resources. A District WAMS personnel requirements study was conducted, with results indicating that a billet be assigned to each of the eight CONUS districts. Funding for these billets is in the President's Fiscal Year 1991 budget request.

Recommendation SRA2. The Coast Guard should reinstate the requirement that WAMS be submitted to Headquarters so that progress and sufficiency of the analyses can be monitored.

Commandant Notice 16501 dated 3 October 1988 was issued requiring that WAMS studies of critical waterways be provided to the Short Range Aids to Navigation Division of the Office of Navigation Safety and Waterways Services at Headquarters.

SENATOR LAUTENBERG: Of particular concern is the recommendation to develop improved measures for analyzing the effectiveness of the several commercial vessel safety programs. The report stated "...the measures should provide a more direct link between program elements and prevention of death, injury and property damage." How do you plan to measure these program activities?

ANSWER: Collection and evaluation of data, critical to the commercial vessel safety program, is an ongoing effort to determine the most effective methods to measure program activities. Completion of this project is expected during the fourth quarter of FY 1990. A determination of changes in measurements, if any are indicated, will be made at that time.

SENATOR LAUTENBERG: Would these recommendations be relevant for all Coast Guard prevention and enforcement programs including port safety, recreational boating safety and law enforcement (including drug interdiction)? If not, why not? If so, what are your plans?

ANSWER: The recommendation to "...develop improved measures for analyzing the effectiveness of the several elements of the commercial vessel safety program...and provide a more direct link between program elements and prevention of death injury and property damage....", is also relevant for port safety, recreational boating safety and to some extent, law enforcement. Management initiatives are ongoing which require the review of program measures of effectiveness and validation of these measures. Activity in each of the above programs is being evaluated and, where necessary, criteria developed to refine the effectiveness measures. While the concerns are slightly different in the three program areas, effectiveness measures are developed which rely upon available data and/or performance standards.

SENATOR LAUTENBERG: When is any level of inspection, enforcement or surveillance enough, overkill or too little? That is, how do you analyze and quantify appropriate levels of enforcement, surveillance, inspection, etc.?

ANSWER: To determine appropriate levels of enforcement, surveillance or inspection activities, criteria are developed by analyzing several factors. In the case of the commercial vessel safety program, the analysis includes factors such the relative risk of death and property damage as a function of vessel class and type of casualty, and the exposure to risk of each vessel based on operating area, time of year and frequency of operation. In turn, such analyses are used to develop program effectiveness measures. Finally, the number and mix of our resources are constraints on how frequently the various types of inspection activities are conducted.

SENATOR LAUTENBERG: How is this analysis integrated into rulemakings and in program management?

ANSWER: Analytical results, as discussed in response to the previous question, are used to determine whether a change in Coast Guard program management is required or whether additional controls should be imposed on the marine industry. When analysis points to the fact that a change in the level of Coast Guard oversight is indicated, internal policy is issued to effect that change. When internal measures are not effective or not permitted within existing authority, legislation is proposed to provide the necessary impetus. This process is iterative, continuous, and dynamic ... hopefully seeking the most efficient return on resources, yet assuring an adequate margin of safety.

CIVIL PENALTIES

SENATOR LAUTENBERG: Are the fines levied against owners and operators of vessels and waterfront facilities for violations under the various port and environmental safety and hazardous regulations sufficient to act as deterrents?

ANSWER: Penalties are a deterrent to violations, but penalties alone, regardless of the amount, do not prevent violations from occurring. Although penalties which the Coast Guard assesses for violations are not the maximum allowed by statute, other enforcement methods such as denial of a vessel to make a port call, or detention of a vessel in port, represent significant financial burdens on industry and encourage compliance with these regulations. As with many regulations, enforcement plays only a part of the compliance picture. Enforcement coupled with education of the regulated industry is the key to the compliance effort.

SENATOR LAUTENBERG: For each statute and or regulation (by part), provide a table showing the maximum fine, the number of violations, average penalty assessed, average time between violation and assessment, average penalty collected, and average time between penalty assessment and collection.

ANSWER: Attachment (1) is Commandant Instruction 16200.3, which has seven enclosures. These enclosures list the regulations the Coast Guard enforces and the maximum penalties assessable for violations of those regulations.

Attachment (2) lists, for each regulation violated in Calendar Year 1988, the regulation's citation, the number of violations and the average assessments. The Coast Guard's Marine Safety Information System (MSIS) generated the table. Calendar Year 1988 is the last year for which complete MSIS information is available.

Attachment (3) lists, for each regulation violated in Calendar Year 1988, the regulation's citation, the number of violations and the average penalty paid. MSIS generated this table.

Attachment (4) contains civil penalty data from the Coast Guard Pacific Area Hearing Officer database. Pacific Area has operational and administrative control of the four West Coast Districts. The data include:

(1) Number of violations processed for Fiscal Year 1988, Fiscal Year 1989 and Fiscal Year 1990 (through June 5, 1990);

(2) Average penalty assessed for Fiscal Year 1988, Fiscal Year 1989 and Fiscal Year 1990;

(3) Average time between violation and assessment for Fiscal Year 1989 and Fiscal Year 1990;

(4) Average penalty collected for Fiscal Year 1988, Fiscal Year 1989 and Fiscal Year 1990; and

(5) Average time between penalty assessment and collection for Fiscal Year 1989 and Fiscal Year 1990.

The Atlantic Area Coast Guard Districts do not yet have an equivalent unified database. MSIS is currently being redesigned to allow collection of information on all aspects of the civil penalty process Coast Guard-wide.

[CLERK'S NOTE.--Attachments (1), (2), and (3) will be available for review from the subcommittee office files.]

ATTACHMENT (4)

PACIFIC AREA HEARING OFFICER DATA
(Fiscal Years 1988, 1989 and 1990)

1. Number of Violations :	FY88	2264
	FY89	2703
	FY90	1618 [1]
2. Average Penalty Assessed:	FY88	$789.36
	FY89	$543.62
	FY90	$952.51
3. Average Time Between Violation and Assessment:		
	FY89	202 days
	FY90	203 days

4. Average Penalty Collected by Hearing Officer:

FY88	$702.46
FY89	$579.18
FY90	$445.52

5. Average Time Between Assessment and Collection by Hearing Officer:

FY89	68 days
FY90	45 days

NOTE 1: For FY90 through June 5, 1990.

SENATOR LAUTENBERG: In your February 1990 report on "Coast Guard Cost Recovery Activities" to this Subcommittee, you indicated that consolidation of this function at MLC Pacific, and the use of Reserve and temporary personnel contributed to the reduction in backlog and increase in collections. Estimate the number of FTE and costs of Reserve and temporary personnel detailed to this effort.

ANSWER: In FY 1989, approximately 1-1/3 temporary FTE were detailed to this effort, at an estimated cost of $56,000. For FY 1990, projected to the end of the fiscal year, approximately 3-3/4 FTE will be used at an estimated cost of $139,000.

SENATOR LAUTENBERG: What, specifically, will the $220,000 requested on p.53, to centralize oversight of the civil penalty process and improve collections be used for? How will oversight of this process be conducted? What is your dollar estimate of improved collections?

ANSWER: The request will fund personnel to (1) establish centralized oversight of the Coast Guard civil penalty process; and, (2) maintain the staffing level of the Maintenance and Logistics Command Pacific (MLCPAC) collections office, currently achieved through the use of temporary resources. The additional funding will increase the availability and utility of the Coast Guard Marine Safety Information System (MSIS) to field hearing officers.

Establishment of centralized oversight of the civil penalty process will provide:

(1) Uniform data collection, and statistical and trend analysis;

(2) Centralized monitoring, standardization and management of civil penalty assessment and collection procedures used in the field; and

(3) Improved coordination of effort with Coast Guard operational programs to ensure that the penalty process meets enforcement needs.

Civil penalty collections have improved significantly ($988,000 collected in FY89) with the consolidation of the collections function at MLCPAC and the application of temporary resources. By maintaining the current staffing level at MLCPAC and establishing centralized oversight of the process, the Coast Guard's goal is to collect 80-90% of the value of its civil penalty collection caseload, projected to be $3.2-3.6 million annually.

WATERWAYS MANAGEMENT

SENATOR LAUTENBERG: Re: p.44: How do the Waterways Analysis and Management System (WAMS) studies relate to the Port Needs Study being conducted by Transportation System Center for the Coast Guard?

ANSWER: WAMS requires periodic reviews of waterways to determine if changes to the aids to navigation on the waterway are necessary to improve maritime safety. During this review, we analyze the use of the waterway, the adequacy of existing aids to navigation, and the concerns of pilots and other mariners. The Port Needs Study is an analysis of the potential contribution of Vessel Traffic Services to reduce risk of casualty within 23 major U.S. ports. VTS complements the aids to navigation system with a surveillance and/or communications system advising ships of traffic and other pertinent situations in an attempt to reduce collisions, rammings, and groundings. WAMS analyses will provide some data to the Port Needs Study group in their assessment of the requirements for Vessel Traffic Services in individual ports.

SENATOR LAUTENBERG: When will the Port Needs Study be complete? With the requested resources, when will the WAMS studies be completed?

ANSWER: The Port Needs Study is scheduled for completion by the Transportation Systems Center (DOT) in the Spring of 1991. We plan to complete the first round of WAMS studies of the 435 critical waterways by the summer of 1993. We would then begin updates (every three years) of the original WAMS to identify changes in the usage of the waterway.

SENATOR LAUTENBERG: Define the terms "critical" and "non-critical" waterway. Why is this designation important?

ANSWER: "Critical" defines those navigable waterways in which the disruption or degradation of the aids to navigation system is unacceptable for one or more of the following reasons: they are essential to national defense; they are traveled by vessels carrying hazardous materials and a casualty would severely damage the environment; or their critical geography poses an extremely high risk of danger to the ships traveling them. "Non-critical" are waterways which serve commercial and recreational interests where the disruption or degradation of an aid system will not increase the risk from a marine accident to an unacceptable level. This designation helps set priority when distributing scarce resources and funds. It also helps in making "triage" decisions when restoring damaged waterways resulting from natural disasters such as hurricanes or floods.

SENATOR LAUTENBERG: You say district staffs were not previously augmented to handle WAMS analyses. Typically, how is the district staffed for the management of aids to navigation. Aren't these personnel already responsible for the management of aids to navigation on these waterways? What other functions are these personnel required to perform?

ANSWER: Each district has an Aids to Navigation Branch that supervises the district aids to navigation (ATON) program. These branches are typically headed by a captain or commander, with a staff of officers, civilians, and enlisted people ranging in size from 20 for a large district to 9 for a small one. These people are responsible for managing the establishment and maintenance of aids to navigation; promulgating marine information such as Local

Notice to Mariners; managing ATON cutters, boats and shore facilities; coordinating training, funding and scheduling of units; and reviewing waterway development projects. The Waterways Analysis and Management System (WAMS) was developed to document information about waterways and users to justify improvements or changes to aids to navigation. WAMS is manpower intensive, adding a significant workload to district staffs. It requires the district staff to visit the waterways, ride ships both in daylight and at night, and meet with user groups such as pilots and shipping companies to determine their needs. It requires complete documentation of the waterway, its traffic, types of cargo, and accident history. We recognize WAMS added a significant workload to each district, but were unable to provide additional positions for this work until the ten billets requested in our FY 1991 budget. The considerable manpower requirements, coupled with FY 1985 budget reductions (156 FTE for ATON contracting) caused delays in WAMS reviews. A 1988 DOT Safety Review task force cited WAMS as "well founded" and recommended we provide greater attention to its full implementation. The FY 1991 request will allow us to conduct the program as designed.

SENATOR LAUTENBERG: How did the "Gilbert I" reorganization impact district aids to navigation staff?

ANSWER: Each district Aids to Navigation Branch assumed some additional waterways management functions related to oversight of anchorages and waterway regulations. The biggest impacts were on the growth of the First and Fifth Districts which absorbed the old Third District, and the growth of the Eleventh and Thirteenth Districts which absorbed the old Twelfth District. The aids to navigation billets in the old Third and Twelfth Districts were apportioned to the growth districts. Four billets were assigned to other programs because of the efficiencies gained by this consolidation. "Gilbert I" did not adversely impact the district aids to navigation branches.

SENATOR LAUTENBERG: What other vessel traffic management schemes or navigation safety requirements does the Coast Guard employ? Provide a brief description of each, examples of where they are employed, and future plans and regulatory projects. Please provide specific detailed information on the specific schemes employed in the Ports of New York and Philadelphia areas.

ANSWER: The Coast Guard employs vessel traffic services (VTS) as one form of waterway management. The VTSs are currently located in San Francisco, Valdez, Puget Sound and Houston-Galveston with a new service to be in operation in New York harbor by December 1990. A Port Needs Study is currently being conducted to identify any additional ports needing VTS. The results are expected by April 1991.

In addition, Traffic Separation Schemes (TSS) are used to organize the flow of ships in the vicinity of U.S. ports. Currently, there are TSSs in or in the approaches to San Francisco, CA; the Santa Barbara Channel, Los Angeles/Long Beach, Portland, ME; Boston; Narragansett Bay; and Buzzards Bay; New York; Delaware Bay; Chesapeake Bay; and Galveston Bay. The Coast Guard is studying the Florida coast to determine if routing measures, such as a TSS, are needed in Miami or off the Florida Keys.

Federally and state licensed pilots supplement Coast Guard management schemes with their unique expertise and knowledge of local waterway conditions. There are also navigation safety regulations which mandate carriage of navigation charts and other navigation equipment as addressed specifically in 33 CFR 164.33.

Regarding New York and Philadelphia, several additional measures are in place. The Coast Guard has continued radar monitoring of the New York Harbor Upper Bay Anchorage after closing VTS New York. Inland Waterways Navigation Regulations (33 CFR 162) are in force in Manhasset, N.Y., Flushing, N.Y., and Ambrose Channel which deal respectively with seaplane operations, operations near La Guardia Airport, and restrictions on use of the channel. An additional regulation contains special rules for navigation in the Chesapeake and Delaware Canal. Safety Zones, Security Zones and Regulated Navigation Areas (33 CFR 165) are established to protect against unsafe operations in specific areas. In New York and Philadelphia, three are currently in force: Sandy Hook Bay, New Jersey - security zone; Delaware Bay and River - regulated navigation area; and New York, New Jersey, Sandy Hook Channel, Raritan Bay, Arthur Kill - safety zone. These deal respectively with ammunition piers; draft limitations and oil transfer; and LPG facilities.

ENVIRONMENTAL COMPLIANCE

SENATOR LAUTENBERG: How does the Coast Guard compare to other federal agencies in environmental compliance at its facilities, in disposal of its many hazardous wastes, and in waste minimization. Will the FY 1991 budget request place the Coast Guard out front?

ANSWER: Environmental compliance at Coast Guard facilities in the areas of hazardous waste disposal and waste minimization is comparable to most Department of Defense (DOD) facilities. Like DOD facilities, our mission requires the operation and maintenance of vessels, aircraft and shore support. Coast Guard and DOD hazardous waste streams are similar in that they both consist primarily of spent solvents, paint slops and thinners, discharged batteries, waste oils, and blasting grit. The Coast Guard's waste minimization program began with the decision to convert navigational aids to solar power thus reducing the amount and cost of primary battery disposal. We are continuing to explore various methods of waste minimization such as substitution with less or non-hazardous materials; recycling; and changing operational processes. These methods will be based in large part upon DOD's past research and experience. The FY 1991 budget request will build on the existing environmental efforts and initiate an Environmental Compliance and Restoration Program similar to DOD's Defense Environmental Restoration Program (DERP).

SENATOR LAUTENBERG: The Coast Guard has requested $4 million in OE and $7 million in AC&I to expand its environmental regulations compliance program and to commence extensive work at Coast Guard Support Center Kodiak. Is the $7 million just the tip of the iceberg in terms of what will be required to cleanup the Kodiak installation.

ANSWER: Yes, we think the $7 million is just the tip of the iceberg. A portion of the $7 million will be used to begin facility site investigations and studies at Support Center Kodiak that will help determine future environmental compliance and restoration needs. We expect to find more problems, but won't know their full extent until investigations are completed. These investigations may take several years to complete.

SENATOR LAUTENBERG: For the record, provide a state by state (and other locations as appropriate) listing of sites undergoing or identified for remediation, identifying priorities, estimated clean-up costs, type and source of pollution, and schedule for clean-up. Is this a comprehensive listing of all problems of this kind across the Coast Guard?

ANSWER: The Coast Guard is conducting major remediation efforts at identified contaminated sites in the states of Alaska, Florida, New York, North Carolina, and Michigan as depicted in the following table:

STATE	FACILITY	COST	POLLUTION	YEAR COMPLETE
1. AK	Support Center Kodiak	$10-50M	O,S,M P	2020
2. FL	Base Miami Beach	$ 350K	S	1991
3. NY	Air Station Brooklyn	$ unk	O	unk
4. NC	Support Center Elizabeth	$10-30M	O	2015
5. MI	Air Station Traverse City	$ 20M	O	2005

O - Oil or other petroleum products from spill or leaks
S - Solvent from paint or engine repair operations
M - Heavy metals
P - Polychlorinated Biphenyl (PCB)

In addition, our Underground Storage Tank (UST) Management Program for the removal and replacement of USTs includes the requirement for remediation wherever soil contamination is identified. These remedial projects are usually smaller and of shorter duration compared to the major cleanups. There are approximately 900 USTs Coast Guard-wide and 25% of these have been removed and replaced with above ground tanks.

We are also in the process of investigating and identifying contaminated sites or suspected contaminated sites via internal environmental audit and inspection programs. We anticipate uncovering several hundred sites that will require small ($5 thousand to $50 thousand) to moderate ($50 thousand to $300 thousand) levels of remediation.

A listing of all problems of this kind will be developed as the site investigations are completed.

SENATOR LAUTENBERG: How much money does the Coast Guard need to cleanup its waste sites? Discuss uncertainties in your estimates.

ANSWER: We cannot accurately estimate a dollar figure for waste site cleanups, but costs could easily be in the hundreds of millions. The uncertainties involve the actual site characteristics, the extent of the problems, the most effective and feasible remedial design and implementation, and proper disposal procedures. The Coast Guard is in the initial stages of developing a service-wide Site Investigation Program to identify the potential scope and magnitude of our hazardous waste site problems. These investigations may take several years to complete.

SENATOR LAUTENBERG: Provide a breakdown of how the $4 million in OE would be used

ANSWER: The $4 million OE for Environmental Compliance and Restoration (EC&R) requested under OE will be used for routine recurring environmental compliance and restoration activities such as Underground Storage Tank (UST) management (removal, cleanups and replacements), minor hazardous waste site investigations and cleanups, environmental audits, third party claims, required environmental documentation, personnel and administration costs.

SENATOR LAUTENBERG: What can you tell us about environmental problems at the Coast Guard Yard in Curtis Bay, Maryland?

ANSWER: In 1988, the Coast Guard conducted a Preliminary Assessment (PA) of the Coast Guard Yard, as required by the Super Fund Amendment and Reauthorization Act. We have subsequently completed studies as part of Site Investigation of the Yard. We expect to receive a Site Evaluation by December 1990. If remediation projects are required, we will develop project plans and request funds under our Environmental Compliance and Restoration Account.

SEARCH AND RESCUE ACTIVITIES

SENATOR LAUTENBERG: What exactly will the proposed funding increase enable the Coast Guard to do in Search and Rescue, or is the increase just a manifestation of the program budget's inflation? How will this improve the effectiveness of the program and enhance the quality and availability of services provided to the public?

ANSWER: Most of the increase is just a manifestation of the program budget's allocation to the Search and Rescue (SAR) program of 21.3% of all general purpose incremental increases such as COLA, pay raises and GSA rent. However, there are some items that benefit the SAR program by a greater percentage. They are addition of personnel at three newly completed stations to meet year-round readiness requirements; personnel and funding to support the congressionally mandated Air Facility Charleston, South Carolina; HH-60J maintenance and operations follow-on and personnel requirements; boat crew survival equipment; and completion of the rescue swimmer implementation.

The equipment, platforms and the appropriately trained personnel will improve our units' ability to respond to distress incidents.

SENATOR LAUTENBERG: The Coast Guard budget request for Search and Rescue for FY 1991 is almost a 20 percent increase over the actual amount expended in FY 1989. Considering the stricter construction standards for boats, better educated and trained boating public, and better search and rescue facilities and technology, why hasn't the Coast Guard budget for search and rescue activities decreased? (Please justify your answer with data on SAR cases, both life-threatening and non-emergency.)

ANSWER: The FY 1991 Coast Guard budget request for Search and Rescue (SAR), as reflected on page 23 of the FY 1991 Congressional Stage Budget, should not be directly compared to the data for FY 1989 because the budget amounts shown on page 23 for FY 1989 do not include any of the $140,000,000 services-in-kind funding received from the Department of Defense. When the services-in-kind funding is added to the FY 1989 dollars, the search and rescue budget request for FY 1991 is only about 9 percent greater than the actual amount expended two years earlier in FY 1989. Table A shows the FY 1989 Coast Guard program budget authority, including a distribution of DoD services-in-kind funding. A constant-dollar comparison reduces the difference between FY 1989 and FY 1991 to $7,137,000, or 1.4 percent real growth.

Examples of initiatives in the FY 1991 budget which expand the capability of the SAR program include the new air facility at

Charleston, SC; new medium-range helicopters and short-range helicopter improvements; new or expanded station facilities that allow an increased number of boats and crew for SAR emergency responses; crew survival equipment; completion of the helo rescue swimmer plan; and improved computer-assisted search planning and ship-reporting facilities.

Even though the number of registered boats has increased steadily, the fatality rate decreased to its lowest level in FY 1989, five per one hundred thousand boats. There are many factors which contribute to the success of making our waterways safer. But while the boating public may be safer, it does not translate directly to reduced search and rescue program funding.

The primary cost incurred for the Nation's maritime SAR system is maintaining the ability to act promptly. Like a fire house, we must maintain the capability to respond immediately to emergencies whenever they occur. This requires a certain level of staffing and resources. The overwhelming majority of our multi-mission stations and air stations operate at a minimum level: one boat or aircraft, plus crew, ready to deploy at a moment's notice. Thus, the primary program costs for this capability are in personnel, hardware, and facilities. The tempo of operations has a comparatively lesser effect upon the operating cost of the system.

TABLE A

DEPARTMENT OF TRANSPORTATION
U.S. COAST GUARD
OPERATING EXPENSES
BUDGET AUTHORITY (dollars in thousands)

Program by activities	FY 1989 Appropriation	
Search and Rescue		458,845
Aids to Navigation		441,961
Marine Safety		128,039
Marine Environment Protection		137,715
Enforcement of Laws and Treaties		714,593
Ice Operations		98,529
Defense Readiness		112,701
Headquarters Administration	(127,449)	
Total Appropriation	2,092,383	

Note: This table includes $140 million of services-in-kind funding from DoD.

SENATOR LAUTENBERG: What number and percentage of SAR missions are performed by the Coast Guard Auxiliary? Is this percentage increasing or decreasing? What, if any, efforts are being undertaken to increase this percentage?

ANSWER: The contribution of the Coast Guard Auxiliary as a percentage of total search and rescue (SAR) sorties has fallen from a historical high of 20 percent (17,583 sorties) in fiscal year (FY) 1982 to a low of 9.3 percent (7,624 sorties) in FY 1989. The corresponding figures for FY88 and FY87 were 9.8 percent and 10.2 percent, respectively.

Growth in commercial towing involvement in non-distress assistance to recreational boaters over the last few years has reduced the number of Coast Guard responses to low severity SAR cases, the primary area of auxiliary involvement. Since FY85, when the Coast Guard SAR database first contained statistics on commercial assistance providers, the percentage of recorded cases involving commercial providers has increased from 4.4 percent of the total to a high of 10.1 percent during FY88. In FY89, commercial providers handled 8.4 percent of the cases reported to the Coast Guard. The actual number of cases handled by the commercial providers is higher - by how much we do not know since many of these distress cases are never reported to the Coast Guard by the boater - they deal directly with the commercial provider.

Some decrease in low and moderate severity cases has also occurred as boaters seem to be better prepared, due partly to the Coast Guard and Coast Guard Auxiliary efforts in promoting boating safety. This preventive SAR is an important part of the SAR mission.

While the number of SAR missions performed by the auxiliary has decreased, the Coast Guard has increased Auxiliary participation in aspects of the SAR mission. There is more to SAR than going out and towing someone in. The Auxiliary's public boating safety and education programs are outstanding examples of preventive SAR. We encourage the use of Auxiliarists wherever and whenever possible at our groups and stations. At these front-line SAR response units, Auxiliarists are being used as communications watchstanders and boat crewmembers.

The Coast Guard will continue to use the Auxiliary to respond to SAR cases where possible. In the Ninth Coast Guard District, the Auxiliary operates six summertime SAR stations. The Fifth Coast Guard District has established four Auxiliary operated seasonal SAR detachments in areas lacking a Coast Guard presence. The Fifth District is also using the Auxiliary to extend the time several regular-Coast Guard manned SAR detachments are open. In the Second Coast Guard District, the Auxiliary continues to perform a majority of the SAR sorties; in FY89 the Auxiliary accounted for 66 percent of the SAR sorties in the Second District.

SENATOR LAUTENBERG: Why does the Coast Guard retain a BRAVO 0 (airborne within 30 minutes of notification) SAR air response in areas where Department of Defense units maintain such a posture? Where are these areas and how many units does this double coverage involve?

ANSWER: There are no areas where Department of Defense (DOD) air resources are on a BRAVO 0 search and rescue (SAR) standby, capable of providing adequate SAR coverage for the entire area that Coast Guard air stations (CGAS) cover. In the few places where a DOD air facility maintains a BRAVO 0 response, it is in support of DOD mission needs. In most locations, many miles separate these facilities from the nearest CGAS.

The National SAR Plan designates the Coast Guard as primary agency for SAR in the United States Maritime area. In support of the National SAR Plan, DOD components provide SAR facilities for their own operations, and these facilities may be used for civil needs on a not-to-interfere basis with military missions. DOD resources are generally not trained or equipped for SAR.

DOD resources are often called on to support maritime SAR missions where the number of available Coast Guard resources is insufficient to efficiently and effectively prosecute the incident, or where the type of DOD aircraft is particularly well suited for the mission, or if the DOD units are closer and able to respond more rapidly. These DOD facilities usually are on a call up status and not in a BRAVO 0 response posture. DOD facilities are also called on to provide backup when all aircraft at a CGAS are unavailable due to multiple missions in progress, maintenance or casualty.

DOD facilities that maintain a BRAVO 0 SAR aircraft and the nearest CGAS(s) are as follows:

Patuxent Naval Air Test Center (working hours and during operations only)	CGAS Cape May CGAS Elizabeth City
Oceana Naval Air Station (NAS) Cherry Point Marine Corps Air Station (MCAS) (both working hours and during operations only)	CGAS Elizabeth City
Pensacola NAS	CGAS Clearwater Coast Guard Aviation Training Center Mobile (fixed wing SAR response only) CGAS New Orleans
Whidbey Island NAS	CGAS Port Angeles
Elmendorf Air Force Base (current SAR aircraft to be transferred to Alaska Air National Guard, BRAVO 0 response posture not expected)	CGAS Kodiak

SENATOR LAUTENBERG: How many states (and which states) provide their own state-wide SAR capability? What has the Coast Guard done to increase this number? What are the problems in increasing state SAR capabilities?

ANSWER: Most coastal states provide state-wide search and rescue (SAR) for recreational boaters under cooperative agreements with the Coast Guard. We do not know of any state where the state-wide responsibility lies within a single state agency. SAR is a primary mission of the Coast Guard, but for those responsible for SAR at the state level, it is only a secondary mission. As a secondary mission it often receives the equipment and training emphasis consistent with that position. State capability comes from a variety of resources at the state, county, and local level including state police, sheriff and police departments, fire departments, volunteers, etc. The state jurisdiction closest to the incident normally coordinates the response to a SAR case. State capability on coastal waters is limited because of the expertise and rescue equipment that is required. Our SAR units also enter into SAR agreements with local subdivisions of the states. A Coast Guard unit could have agreements with a number of local municipalities and organizations within its area of responsibility. We intend to continue to enter into local agreements to meet the current needs and provide the best SAR response for the maritime community. Funding required for proper rescue equipment, and the lack of SAR-trained personnel are the main problems in increasing state SAR capabilities.

MANAGEMENT INFORMATION SYSTEMS

SENATOR LAUTENBERG: The Coast Guard has been in the process of automating its record keeping function and developing management information systems on merchant marine personnel documentation and licensing and enforcement actions taken upon personnel engaged in commercial vessel and recreation boating activities. How is the documentation and licensing automation and management information system effort progressing, and when will the projects be completed in the field and headquarters?

ANSWER: As the first system to be developed in the Marine Safety Network (previously MSIS II), the automation of merchant mariner's documentation and licensing is progressing on schedule. A detailed functional specification describing the automation requirements has been completed by GSA's Federal Systems Integration and Management Center (FEDSIM), and a contracted prototype design and development effort will begin in July 1990. The completion and deployment of the prototype system is scheduled for March 1991. Completion of full system development and deployment is planned for March 1992. A database containing sea service histories of the estimated 120,000 active merchant mariners is being developed and is scheduled for completion in June 1991. The five manual record keeping systems which support the estimated 3 million merchant mariner paper records at the Federal Records Center are being replaced with an automated cataloguing system and database. This effort is scheduled for completion in October 1991.

A rewrite of the Law Enforcement Information System (LEIS) has begun. The redesigned system will maintain information on recreational boating enforcement action which will be readily available to our units. The new system will expedite the flow of information internally and with other law enforcement agencies. LEIS deployment will begin 1992 and will be complete by 1994.

SENATOR LAUTENBERG: How much of this year's budget request is for the office automation and management systems improvement? How much additional money is going to be needed to complete the projects?

ANSWER: Three million eight hundred thousand dollars in FY91 AC&I funds and two million eight hundred thousand dollars in FY92 AC&I funds will be required to complete the projects.

SENATOR LAUTENBERG: What data will be available and how will it be configured with the new systems to make the Coast Guard more effective managers of the program?

ANSWER: The following data will be available: merchant mariner personnel profiles; sea service and application processing histories; seaman locator and wanted lists; licenses and documents issued; application and examination status; paper file locator keys; field unit processing activity; and resource utilization information.

The central database will be located at the Coast Guard Operations Computer Center in Martinsburg, West Virginia. The CG standard systems architecture employs a relational standard query language (SQL) database management system. The Coast Guard will be more responsive to requests from merchant mariners regarding information in their active and historical records. This new system will contain and link other databases to support combined queries by Coast Guard personnel performing other activities. For example, information will be available on vessel boardings and investigations of incidents on vessels or facilities where merchant mariner personnel are involved. In support of the Marine Licensing Program, the system will indicate to the processing and approval personnel any tests, physical examinations or requirements the applicant must meet prior to the issuance of a license or document. The system will provide more uniformity and consistency and prevent an applicant from going from one exam center to another to take the same exam. An automatic cross check against the seaman locator and wanted list will flag personnel and prevent an unauthorized applicant from gaining a license or document. Coast Guard field personnel will not need Headquarters intervention to process duplicate licenses and documents.

The system will provide Headquarters and field program management personnel with accurate statistics on the number, types of licenses, documents and certificates of discharge being processed on a daily basis. "Ad hoc" queries of this database will support program analysis and regulatory impact/benefits analysis.

HOW EFFECTIVE ARE COAST GUARD DRUG INTERDICTION EFFORTS?

SENATOR LAUTENBERG: The former Vice Commandant, Admiral Irwin, now chief of DoD's unified drug interdiction task force for the Atlantic region, testified before our Defense Subcommittee two weeks ago on DoD's unified drug interdiction effort for the Atlantic Region. Admiral Irwin told us that, in the area of drug interdiction, it is difficult to assess past operational accomplishments, for no one has yet found a way to reliably measure effectiveness. Do you agree with Admiral Irwin, that we cannot really measure the success of these efforts?

ANSWER: There is no single, simple best measure of effectiveness. While assessing the impact of drug interdiction is important to the overall drug control effort, the clandestine nature of drug trafficking limits the amount and accuracy of data available, making it extremely difficult to reliably quantify the effectiveness of drug interdiction. While selected discrete measures under certain conditions may be useful, reliable quantifiable indicators are not readily or uniformly available. Comparing drug data such as the volume of drugs seized or the street price of drugs is helpful in projecting trends; but comparing absolute numbers, which are based upon estimates for the most part, can be misleading.

A common tendency is to use the volume of drugs seized, or some calculated rate of seizures, as quantitative measures of effectiveness. While these measures may be useful trend indicators or reasonable measures for short term and regionally localized efforts, they are limited in their applicability. There are too many unknowns in trying to relate the volume of drugs seized to some base: sources of drugs; total volume and types of drugs shipped; modes, methods and routes of shipment; drugs dumped or otherwise not delivered because of law enforcement presence; and the value of deterrence. Only very rough estimates of all of these parameters are available, thus seizure data are of limited value as a measure of effectiveness.

Drug interdiction evaluations must consider qualitative indicators of deterrence, disruption, and displacement. For example, delays in shipment, changes in routes and modes, and changes in distribution networks and patterns result in increased costs and risks to traffickers. Effectiveness measures must be continuously evaluated and revised with the emphasis on quantitative measures wherever possible. However, qualitative indicators are also required to get a good picture of how we in the interdiction business are doing.

SENATOR LAUTENBERG: It is a well-known fact that drugs are as prevalent on the street today as ever before. The available supply has caused the price of cocaine to decline. Given these facts, how do you evaluate the cost effectiveness of your drug interdiction efforts?

ANSWER: That supplies are more prevalent is not an indictment of interdiction, but more accurately a reflector of the enormity of the supply. Cocaine seizures continue to grow while prices fall; this is the logical result of massive increases in volumes shipped. Given the proven resiliency of suppliers to increase production, shift transport routes and replace arrested traffickers and seized aircraft/ships in response to shifts in interdiction tactics, interdiction is not cost effective in the long term and cannot alone solve the drug problem. Demand reduction is absolutely required to make America drug-free. But demand reduction is only achievable over the long term. Until then interdiction is essential. The President's Drug Strategy reflects this approach.

INCREASING SOPHISTICATION OF DRUG SMUGGLERS

SENATOR LAUTENBERG: It's widely known that the drug smuggling business has gotten increasingly sophisticated. Drug importers are using highly sophisticated electronics to detect the fact that we are tracking them. What is the Coast Guard doing to address the increasing sophistication of the drug smuggling business?

ANSWER: Smugglers have been forced to become more sophisticated in response to pressures by enforcement agencies. They have been forced to shift production sources, change routes, utilize hidden compartments, conceal contraband within containers and legitimate bulk shipments, and begin counter surveillance operations of their own. Our response has been to increase the sophistication of our own operations. We have increased radio and radar emissions control (EMCON) to reduce the electronic signature of our units. Deceptive tactics and operational security (OPSEC) measures are also employed.

SENATOR LAUTENBERG: It has been reported that drug smugglers are increasingly seeking to import drugs using containerized shipping. One method is to conceal drugs in containers marked "hazardous materials" so as to divert the attention of the Coast Guard and the Custom Service from possible presence of drugs. What can you report to me about this practice, and what steps have you taken to address it?

ANSWER: Although anecdotal instances have been observed, the Coast Guard has no information indicative of a trend relative to masking contraband shipments with "hazardous materials" placarding. Development of technology that will detect the presence of drugs in hidden, containerized, and bulk cargo shipments remains a top priority for our research and development efforts in law enforcement.

NAVY INVOLVEMENT IN DRUG INTERDICTION

SENATOR LAUTENBERG: Admiral Leland, Chief of Law Enforcement and Defense Operations, recently pointed out to the press that the Navy is expected to increase its ship hours for drug interdiction by 50 percent and its flight hours for drug interdiction by 400 percent this coming year, to provide roughly 60,000 hours of ship time and 40,000 hours of aircraft time for the drug war. Compare these figures with the Coast Guard's time commitments to the drug interdiction mission.

ANSWER: Operating hours associated with anti-drug operations by Coast Guard cutters and aircraft are as shown below:

	FY 1988 (Actual)	FY 1989 (Actual)	FY 1990 (Estimated)	FY 1991 (Estimated)
Cutters	126,786	158,047	199,800	205,200
Aircraft	18,486	26,748	34,800	35,000

SENATOR LAUTENBERG: What coordination took place in development of your budget request for drug interdiction with the request of the Navy and other parts of DoD?

ANSWER: Joint undertakings with other services require liaison which is reflected in the budget development process. For example, the C-2 logistics aircraft and Land Based Aerostat (LBA) initiatives both involved consultations with Department of Defense (DoD) elements. All anti-drug proposals were subject to review by Office of National Drug Control Policy (ONDCP); therefore it was in our mutual interest to ensure that any budget proposals were in conformance with the National Drug Strategy developed by ONDCP. Both DoD and the Coast Guard serve as deputy chairs on the Border Interdiction Committee, charged by ONDCP with strategic and policy coordination among all agencies with an interdiction role. This committee serves as an important forum to sort out policy and programmatic issues with DoD which must precede budget action.

SENATOR LAUTENBERG: Did DoD or OMB evaluate your budget request for drug interdiction in concert with the request of the Navy?

ANSWER: The Coast Guard is not privy to the internal budget review processes at Department of Defense (DoD) and Office of Management and Budget (OMB). That these processes should systematically consider other agency/department budgets, however, is presumed, and is reflected by the lack of overlap.

SENATOR LAUTENBERG: Was this request and the request for DoD coordinated by Director Bennett and his office?

ANSWER: The Office of National Drug Control Policy's (ONDCP) is charged to certify agency/departmental budgets relative to their support for the President's National Drug Strategy. ONDCP provides budget and policy guidance to agencies in conformance with the National Strategy and to avoid redundancy and overlap.

SENATOR LAUTENBERG: Admiral Irwin, in his testimony before the committee, cited the need to improve coordination between the Coast Guard and the Customs Service in the drug interdiction efforts, especially in the employment of their surveillance and radar assets. Admiral Leland also made mention of the need to overcome competition between the two agencies. What steps have you taken to improve coordination and cooperation with the Customs Service?

ANSWER: Coast Guard personnel, from the headquarters level to the field level, are complying with Coast Guard policy to emphasize cooperative efforts with all involved agencies to maximize effectiveness and efficiency of joint operations.

The Coast Guard has joined with the Customs Service at the headquarters level to complete development of the C3I East Center in Miami. Coast Guard officers have been assigned full time to the Customs Service C3I Joint Project Office (JPO) to bring Coast Guard resources to bear in improving the C3I East facility.

The Coast Guard Atlantic Area Commander is planning air interdiction operations in full cooperation with the Customs National Aviation Center (CNAC). Coast Guard air interdiction operations orders and planning documents are released after coordination with CNAC, and reflect that coordination in writing within the documents.

The Coast Guard operational commander at C3I East is emphasizing cooperative operations with his Customs Service counterparts at C3I East. There has been progress in reducing competition and duplication at the operational level.

SENATOR LAUTENBERG: Have these efforts been made more complex with the expanding role of the DoD in this area?

ANSWER: No, not really. Of course any time you add new players or modify organizational roles, some additional coordination is necessary. DOD is not a new player however; they have been involved in the mission in an increasing degree since the early eighties. A good deal of coordination was already taking place. Their new role in detection and monitoring will require some new coordination and it will take some time to grow into the new arrangement fully. As a member of the Armed Services, we have a long history of working with DOD and are very comfortable doing so.

COAST GUARD EXPERIENCE WITH AEROSTATS

SENATOR LAUTENBERG: The Coast Guard currently operates 5 sea-based aerostats as well as 3 land based aerostats. I understand that you plan to bring 5 more land-based aerostats on line sometime in 1991. The objective of the aerostats is to combine those radars operated by Customs and the Coast Guard with the radar aboard Coast Guard and Customs planes to create a radar fence for interdiction along our southern border. Am I correct in my understanding that there are considerable holes in the "fence" at the current time?

ANSWER: Yes, there are still holes in the "fence." The Coast Guard presently operates 2 land based aerostat (LBA) systems in the Bahama Island chain. The Air Force operates an LBA site on Cudjoe Key, Florida. Customs controls 3 Southwest Border sites in New Mexico and Arizona, and has three sites in Texas which are temporarily grounded due to contractor problems. A site is under construction in Puerto Rico and will be operated by the Commonwealth Government. A gap which currently exists between our Georgetown site in the Bahamas and Puerto Rico will be filled by a planned system on Great Inagua Island. A gap also exists between the easternmost Texas site and Cudjoe Key. This will be filled by the planned sites at Matagorda, TX; Morgan City, LA; Alabama Port, AL; Horseshoe Beach, FL; and Venice, FL. These planned installations have been delayed 9-12 months because of contractual difficulties Customs is experiencing with the request for proposal (RFP) ... Customs is the responsible agency for the acquisition and contracting of the land based aerostat program. A revised schedule for the network of sixteen LBAs to be fully operational is October of 1992.

Until such time as the existing gaps are filled, a combination of airborne and ground based radar systems will provide surveillance coverage of the Gulf of Mexico and the southern Bahamas area.

SENATOR LAUTENBERG: Given the fact that air and sea interdiction incidents have not increased substantially with the introduction of the aerostats, can we just conclude that the traffickers know to avoid areas covered by radar?

ANSWER: Clearly, given a choice, smugglers will avoid areas covered by radar. Land Based (LBA) and Sea Based Aerostats (SBA) provide a noticeable deterrent for drug traffickers. Intelligence indicates that drug traffickers seek alternate routes avoiding aerostat locations. The fact that drug smugglers are compelled to change tactics is a qualitative indicator of the deterrence provided by these resources. We've seen instances where marine traffic drops off up to 50% in areas where SBA's operate. But smugglers are not always successful in avoiding detection by these systems. During Fiscal Year 88/89 SBA's contributed to three cocaine seizures (7,204 lbs), three marijuana seizures (76,115 lbs), 10 seizures resulting from fisheries, currency and other law enforcement violations (54 total arrests), and nine alien interdiction cases (with 696 people repatriated to Haiti). During the same period, LBA's were involved directly in six aircraft seizures with a total of 14 arrests and 1,225 lbs of cocaine confiscated.

SENATOR LAUTENBERG: The GAO has been very critical of the performance of the aerostat balloons. The land-based aerostats seem to have a great deal of difficulty in detecting low flying aircraft. What has been your experience with the land-based aerostats?

ANSWER: We have had favorable results in detecting and tracking low flying air targets using the radar data supplied by our two Land Based Aerostat (LBA) sites in the Bahamas. The LBAs are used primarily to locate and track aircraft which have not filed flight plans and are following visual flight rules (VFR). The Customs Service's LBA sites on the southwest border, which were the subject of the unfavorable General Accounting Office report, have to contend with a large volume of air and ground traffic, and their detection capability is significantly affected by the earth's terrain in their ability to detect low-flying aircraft. Our Bahamian sites are not affected by these problems. It is worthy to note that recent data show CG LBAs in the Bahamas operating close to 90% of the time, far better than the availability figures cited in the GAO report.

SENATOR LAUTENBERG: The GAO also criticized this program because of the extended amount of time that the aerostats are inoperable due to maintenance. How much time have you had to commit toward the maintenance of your aerostat balloons in comparison to their operational hours?

ANSWER: The GAO report focused on the Custom Service's Land Based Aerostats (LBAs) along the U.S./Mexican Border. The majority of our LBA downtime is a result of severe weather (thunderstorms), which is common in that area in the summer and early fall. Weather downtime for calender year 1989 was approximately 31% at our site on Grand Bahama Island. Of course, most of the time that an aerostat is not operating due to severe weather, conditions are such that drug smugglers are also not able to operate. In first quarter, FY 1990, Coast Guard LBAs were operating 81% of the time, and a recent survey has them operating close to 90%.

Only an additional 2% downtime per year is attributable to unscheduled or preventive maintenance. The on-site contractors make every attempt to conduct the majority of maintenance at the same time that the aerostat is grounded due to the approach of weather.

SENATOR LAUTENBERG: What about your sea-based aerostats? Have they performed better than the land-based ones?

ANSWER: Sea Based Aerostats (SBAs) are mobile detection resources, able to respond to changing threats and better able to evade severe weather situations than land based ones. As a result, SBAs have a greater on station availability. SBAs have met the 90% availability requirement, even when major system outages, maintenance and weather downtime are factored in.

SENATOR LAUTENBERG: I understand that the Customs Service has been so disturbed with the performance of the aerostats from General Electric that they are thinking of re-competing all new aerostat contracts. Will this affect your planning for bringing up the 5 new land-based aerostats along the Gulf Coast?

ANSWER: Yes. The Commissioner of the Customs Service has decided not to exercise any further options under the General Electric contract, and will re-compete the four Gulf of Mexico sites and the third Caribbean site on Great Inagua Island. These sites are to be turned over to the Coast Guard when they become operational. These five sites will now be delivered between March and November 1992. This decision to re-compete does not affect our project with the Air Force to relocate the Cape Canaveral aerostat to the west coast of Florida.

SENATOR LAUTENBERG: As part of its new mission to be coordinator of all drug interdiction monitoring and detection, the Department of Defense anticipates taking over all aerostat operations in 1991. If that is the case, why are you requesting funds in 1991 to run 5 additional land-based aerostats?

ANSWER: The Commandant of the Coast Guard and the Commissioner of the Customs Service recommended in November 1989 that the Department of Defense (DOD) assume operational and administrative control over all Land Based Aerostats (LBAs). Due to problems with the General Electric LBA systems along the southwest border, and Customs' decision to re-compete for the remaining aerostat sites, DOD has not committed to a decision to assume all responsibilities for this program. Until such time that DOD does take over the LBA program, the Coast Guard must ensure continued operation by providing funds for these valuable resources.

SENATOR LAUTENBERG: Do you intend to transfer operation of your 4 sea based aerostats to the Department of Defense?. What is the status of the plans to transfer responsibility for the aerostats to DOD?

ANSWER: No. Our 5 sea-based aerostats are closely involved in all Coast Guard law enforcement missions and work directly with our surface fleet. Therefore, the transfer of these resources to DOD has not been considered.

With regard to land-based aerostats, negotiations among the affected agencies are still in progress. There will not likely be any transfer before 1992.

SENATOR LAUTENBERG: What is in the base in personnel and all other costs for operation of the aerostats?

ANSWER: The base for Coast Guard land based aerostats (LBAs) is $16.25 million and includes operations and maintenance (O&M) funds for four sites. There are no military personnel assigned to LBA sites. The base for the sea based aerostat (SBA) program for O&M is $26.36 million. Additionally, a total of 92 military personnel are assigned to the five SBAs in southern Florida at an annual cost of approximately $3.2 million per year.

COST EFFECTIVENESS OF FAST BOATS FOR DRUG INTERDICTION

SENATOR LAUTENBERG: The Inspector General has been critical of your fast coastal interceptor program. These five fast boats, operated at a cost of $1.5 million a year, are intended to intercept the type of high-speed boats often used by drug smugglers. The IG charged that, due to high maintenance costs and structural problems, the program is ineffective. What are the Coast Guard's views on the IG's findings?

ANSWER: The Coast Guard generally concurred with the findings of the IG audit report and acted on several items in the report. The recommendations were mainly centered on the relative high cost of the fast coastal interceptor (FCI) program. With this current generation of FCIs we learned several lessons. Early mechanical problems with the fleet have been corrected. Down time is directly attributable to the rigorous utilization that far surpassed the concept of employment that the designers of these recreational vessels had intended.

SENATOR LAUTENBERG: One of the recommendations of the IG was that you should take the fast boats seized by the Customs Service free of charge and use them for your own drug interdiction mission. Have you given consideration to this recommendation?

ANSWER: The Coast Guard is working with the Customs Service to obtain any available and appropriate seized fast coastal interceptors (FCI). The IG report suggests that we could realize a $1.5 million savings by using seized vessels; however, we are skeptical that this magnitude of savings is possible. Customs, as the custodian of the vessels seized by all federal law enforcement agencies, has first right of refusal on seized assets and has historically retained for their use those boats best suited for FCI operations. Of the 144 fast boats in Customs' fleet, 40 were obtained from the seized boat inventory. It remains to be seen whether or not there will be sufficient seized fast boats to meet both our services' needs.

SENATOR LAUTENBERG: Since the fast boats that you have purchased were originally built as pleasure craft, how would using other seized pleasure crafts for this mission differ from your current program?

ANSWER: The Coast Guard utilization of fast coastal interceptors (FCIs) is historically fifteen times greater than the public sector use for that same type of vessel. We anticipated heavy use of the FCIs, and their stout construction is one of the prime reasons that the Tempest Marine Riviera model was selected for the program. As a lesson learned from the current FCIs, outboard powered production model boats and a shorter service life would be factored into any future replacement selections.

SENATOR LAUTENBERG: Is it true that in its two and a half year history, these fast boats have had very few successful seizures?

ANSWER: It ~~is true~~ that there have not been many seizures with Fast Coastal Interceptors (FCIs). However, the deterrent effect must be considered. Drug smugglers are aware of FCI capabilities; this pressures them to change tactics. Our FCI presence ensures that smugglers can no longer operate their own fast boats with impunity. Because of our fast boats, smugglers have abandoned areas once heavily used. In operations at West End and Cat Cay in the Bahamas, FCIs have proven themselves as an effective deterrent to fast boat smuggling.

C-2 LOGISTICS AIRCRAFT

SENATOR LAUTENBERG: What will the Navy's role be in air surveillance? Provide data for FY 1986-90 and estimates for FY 1991 on air surveillance aircraft hours for DoD, the Coast Guard and other agencies. Will the Navy deploy a fleet of C-2 aircraft in South Florida, the Caribbean and the Gulf? If so, would it make more sense for the Navy to deploy these aircraft?

ANSWER: The Navy is expected to participate heavily in the deployment of Airborne Early Warning (AEW) aircraft in the drug war in the Caribbean. These deployments will be planned by Joint Task Force Four (CJTF4) and coordinated with the Joint Planning Group at Command, Control, Communications Intelligence Center (C3I) East. Their deployments are complementary to, and in different locales than, Coast Guard AEW aircraft deployments.

Coast Guard E-2C aircraft are programmed to fly 1,000 hours per year per aircraft. In 1991, with four E-2C's, we expect to fly approximately 4,000 hours. With an average of 2.12 aircraft assigned in 1989 we flew 1746 hrs., and with 1.5 assigned in 1988 we flew 1,449 E-2C hours.

The Coast Guard is not aware of any plans for the Navy to deploy C-2 aircraft to South Florida. The Coast Guard will continue to require the logistics services that this aircraft would provide. More importantly, however, the C-2 aircraft can serve as a training platform for Coast Guard pilots and aircrews, instead of tying up an operational E-2 for this purpose. Having the Navy operate a C-2 aircraft on the Coast Guard's behalf, negates the principal rationale for its employment by the Coast Guard: pilot and aircrew training.

SENATOR LAUTENBERG: Does the request for $365,000 include operating and maintenance costs? If not, why not?

ANSWER: No, the $365,000 provides personnel to maintain a C-2 aircraft. The Coast Guard is working closely with the Navy to acquire a C-2. It is necessary for the maintenance force to be in place and fully trained prior to arrival of the aircraft. Funds to operate and provide parts for the C-2 will be provided from our existing base.

SENATOR LAUTENBERG: What is the base in personnel and all other costs for operation of the C-2 logistics aircraft?

ANSWER: Personnel to maintain the C-2 are not in the base, nor are aircraft operation and maintenance funds (estimated to cost $1,356 per flight hour). The C-2 will be collocated with four E-2Cs at Coast Guard Air Station St. Augustine, Florida. Hangar space, shop/office space and support equipment are in place to support the C-2. The C-2 will be used as the primary airframe to train the 18 existing E-2C pilots; no additional pilots are required. In addition, because the C-2 does not have an Airborne Early Warning (AEW) weapons system, Flight Officers and Flight Technicians are not required.

DRUG USE AMONG COAST GUARD PERSONNEL

SENATOR LAUTENBERG: A recent article in a San Jose paper identified a problem with drug use among Coast Guard personnel, especially in areas where you are conducting drug interdiction missions. The article implied that every 41 hours, one member of a Coast Guard unit is punished for drug use. The article reported that more than 428 incidents occurred in a 16 month period in 1987 and 1988. How do these figures compare to the services in the Department of Defense? What about in comparison to other law enforcement agencies?

ANSWER: 428 incidents in 16 months interpolates to 321 incidents per year. There were approximately 38,000 active duty members for a incident rate of 0.84%. Coast Guard and DoD statistics for FY88 random urinalysis tests are provided. Figures are based on the number of random sample specimens tested rather than service population.

Service	# Specimens Tested	# Positive	% Positive
USCG	42,736	560	1.31
Army	1,189,060	26,222	2.21
Navy	1,470,110	18,945	1.29
Air Force	241,580	905	0.37
Marine Corps	609,766	10,269	1.68

In FY89, the Coast Guard positive rate dropped to 0.68% and in FY90 we are running at a positive rate of 0.49%.

The Division of Applied Research, National Institute of Drug Abuse indicated that the national civilian urinalysis program was too new for there to be meaningful comparative data. Additionally, the relatively younger age of our workforce does not lend itself to direct comparisons with typically older personnel from other law enforcement agencies. Most of our drug use incidents involve our younger, less senior personnel.

SENATOR LAUTENBERG: What are your policies for punishing your personnel when drug use is found? How, if at all, do these policies differ from the other military services?

ANSWER: Our members are subject to the Uniform Code of Military Justice (UCMJ). If a member violates any article of the UCMJ, their cases can be referred to a general, special or summary court-martial, or to non-judicial punishment (NJP) depending on the severity of the infraction. Additionally, Coast Guard members who are found guilty of drug usage or possession, just once, will be administratively separated with at least a General Discharge by reason of misconduct. Our policies for punishing personnel for drug usage are the same as the Department of Defense Services. Their members are also subject to the UCMJ. The only differences are at what point we begin administrative discharge processing and the type of discharge that is normally issued. The Navy and Marines allow some members to receive rehabilitative treatment and will not administratively process members for discharge until a second incident occurs. The Air Force's policy is similar to ours; one drug incident and the member is separated from the Service. The Navy, Marines, and Air Force normally issue "Under Other Than Honorable Conditions Discharges" as compared to Army's and Coast Guard's "General Discharges."

SENATOR LAUTENBERG: Do you think this problem is under control, or are you contemplating additional steps to address it?

ANSWER: The percentage of positive tests in our drug testing program continues to decline each year. Our policy is zero-tolerance, accepting no drug use by our military members. This policy is known and largely accepted by our military members. Although drug use is a fact of life in today's society, our drug testing program results would suggest that we have a substantially smaller incidence of drug use than society as a whole. Despite these successes we are continually reviewing our testing program and making changes as necessary. In FY 1991 we will begin pulse testing for LSD. In addition, we maintain close liaison with Department of Defense counterparts to note the "new" drugs they find in their larger segment of the population so that we may modify our testing program as required.

DRUG POLICY

SENATOR LAUTENBERG: The Conference report accompanying last year's appropriations bill required that you submit a report analyzing the impact of the administration's new drug policy on your drug interdiction efforts. That report is almost three months overdue. Where is the report currently, and when can we expect to see it?

ANSWER: The report was signed by the Secretary of Transportation and forwarded to the Senate and House Committees on Appropriations on May 11, 1990.

IMPROVEMENTS IN THE COAST GUARD ACQUISITION PROCESS

SENATOR LAUTENBERG: This past fall, OMB Director Darman instructed all Cabinet Secretaries to review their major programs and cite major program vulnerabilities. Among the programs cited by Secretary Skinner were the major systems acquisition activities of the FAA and the Coast Guard. The report cited the need for major improvements in your efforts at determining Coast Guard requirements acquisition planning, the development of specifications, as well as the need for improvements in awarding contracts, pre-production testing, and contract administration. What steps have you taken since this past fall to improve your acquisition process?

ANSWER: A number of steps have been taken since last fall to improve the Coast Guard acquisition process. A Systems Acquisition Manual has been published establishing policy and prescribing procedures for the administration of systems acquisitions. A FRAM "lessons learned" report has been prepared and will guide project managers in avoiding pitfalls in the planning and execution of a major acquisition. The specific lessons learned include: prepare thorough and complete specifications; avoid Government Furnished Equipment (GFE) to the extent possible; establish a project management plan prior to contract award; establish a Configuration Control Board early; and fully man the project staff from day one. Further, software is being developed to support and standardize major acquisitions. Prototype portions of the software are in use tracking correspondence and issues in the FRAM project, developing specifications for the buoy tender replacement project, and administering contract warranties for the Island Class patrol boat project. Also, all project managers are now senior Coast Guard personnel, thus providing a high level of management and leadership.

SENATOR LAUTENBERG: As you know, the Fleet Renovation And Modernization (FRAM) project for your 378-foot high endurance cutters is now more than $225 million over cost and well behind schedule. Last year, you assured the Congress that the cost of this program would not exceed $825 million. Is the $825 million figure the end of the hemorrhage for the FRAM project, or are we encountering even further cost overruns?

ANSWER: The FRAM project has stabilized. The delivery schedule is now accelerating, with the duration of FRAM reduced from 36 months to 18 months. The average price of recent settlements is $55 million per ship compared with $71 million for the first 5 ships. Improved management controls have been instituted. A technical baseline has been established. A settlement of all issues for the last 5 ships at Todd has been negotiated.

We recently identified $24 million needed to meet modest project growth of around 3 percent. Additional cost growth is possible due to unforeseen and uncontrollable equipment and structural repairs. It is important to note that while the essential elements of FRAM have been technically defined, additional work remains a possibility until all machinery and equipment for all ships has been removed and inspected.

SENATOR LAUTENBERG: You have also encountered significant cost overruns for the Major Maintenance Availability (MMA) program for your 210 foot cutters and the Service Life Extension Program (SLEP) of your 180 foot buoy tenders. What cost control initiatives have you implemented for future acquisitions of this kind? For example, in future years, you will ask us to put up big money to replace your fleet of motor lifeboats. How will the process for this acquisition differ from those in the past?

ANSWER: It is important to note that the examples cited represent major renovation efforts as opposed to the acquisition of new capital assets such as the motor lifeboat. The FRAM project lessons learned report indicates at least three areas that have a major impact on project cost overruns for renovation projects: preparation of thorough and complete specifications; avoidance of GFE to the extent possible; and controlling contract changes/ modifications. We are paying close attention to these areas and fully expect to see a significant reduction in cost overruns on major renovation projects as a result. Concerning new acquisitions, we have not experienced significant cost overruns on our recent acquisitions such as the HH-60J helicopter and the 270' medium endurance cutter. We feel confident that our cost estimating techniques for new acquisitions are adequate and that there will not be significant cost overruns for the motor lifeboat replacement project.

UPDATE ON DOLPHIN HELICOPTER ENGINES

SENATOR LAUTENBERG: I understand that the Justice Department is currently pursuing an agreement with Lycoming. These negotiations grew out of a criminal fraud investigation of Lycoming, which resulted from the testimony of a whistleblower. When do you anticipate an agreement to be announced? Is there any preliminary information that you can give us about the likely settlement?

ANSWER: The Department of Justice is expected to approve a negotiated settlement in July 1990. The details cannot be made public until then.

SENATOR LAUTENBERG: You have been pursuing the development of alternatives to the Lycoming engine such as the Army's T-800 engine and the Turbomeca engine. Will the settlement with Lycoming eliminate the need to pursue these alternatives.

ANSWER: The pending settlement with Lycoming regarding the HH-65's LTS-101 engine will not eliminate the desirability of pursuing alternative power plants for the HH-65 helicopter. We will continue to pursue a three-pronged approach in our efforts to improve the HH-65 helicopter's performance.

The T-800 engine provides for mission growth potential and is much less susceptible to Foreign Object Damage (FOD) than either of the LTS-101 or the Turbomeca Arriel 1C2 engines. Even if the HH-65/T-800 program goes no further than the proof of concept, the nonrecurring engineering data will be invaluable for procurement of replacement helicopters in the future.

The Turbomeca Arriel 1C2 is deemed the best present commercial engine alternative to power the HH-65. We are planning a proof of concept installation of the Arriel 1C2 in the HH-65. Should the pending Lycoming settlement fail to provide acceptable LTS-101 improvements, a conceptually proven Arriel 1C2 may be the most expedient means of powering the HH-65. However, the Arriel 1C2 would not provide the mission growth potential, the FOD durability, or the Department of Defense supportability of the T-800.

SENATOR LAUTENBERG: What steps do you now take to avoid this kind of problem as part of your acquisition process?

ANSWER: Acquiring DOD compatible products is one solution to avoiding repetition of the problems associated with the Dolphin helicopter engines. In addition, contract specifications must allow margins for growth such as the unplanned weight growth in the Dolphin aircraft.

SENATOR LAUTENBERG: I understand that there is a defective part of the engine, known as the "power turbine" (P.T.) wheel, which holds the potential of cracking and causing catastrophic engine failure. Have all the P.T. wheels been replaced now in the Lycoming engines? If not, why not?

ANSWER: The LTS-101 power turbine wheels are in the process of being replaced. Forty percent of the Coast Guard's operational HH-65 fleet have the new insertable bladed power turbine wheel (IBPT). Manufacturing lead time is the limiting factor in retrofitting the Coast Guard's LTS-101 engines with IBPTs. We are receiving priority support from Lycoming and anticipate all installed engines will be complete by September 1990.

We have experienced no catastrophic aircraft loss or serious personal injuries as a result of flying with the LTS-101 engines. The only safety FAA Airworthiness Directive (AD) outstanding against the LTS-101 engine is for Power Turbine wheel cracks. We have adopted a more stringent inspection than required by the AD. Eddy current and dye penetrant inspections are conducted every 30 engine hours or every 20 engine operating cycles on the single piece turbine wheels. These inspections are eliminated on engines that have the new Insertable Bladed Power Turbine (IBPT).

SHORTCOMINGS AND MISMANAGEMENT IN COAST GUARD COMPUTER OPERATIONS

SENATOR LAUTENBERG: In recent months both the Inspector General and the GAO have been critical of your computer operations. The IG discovered that you had not complied with the department's acquisition regulations in acquiring a new VAX microcomputer system. You installed the system without obtaining an adequate facility for it, and you operated the system without maintaining adequate security over data files and equipment. The GAO's critiques are more far reaching:

- shortcomings in the ability to share information between systems,
- inability of your units to access necessary, information in a short time frame,
- hardware and software is obsolete and unreliable.

What are you doing to address these shortcomings in your computing capabilities and your acquisition process?

ANSWER: The VAX microcomputer was purchased in 1986. As a result of the problems associated with this purchase, a Coast Guard directive was published in May 1988 requiring review of all significant computer acquisition plans prior to purchase. It is important to note that many successful Coast Guard information system procurements of significant size were approved by the Department of Transportation before and after May 1988. We have emphasized the need to provide adequate space and environmental controls for computer systems being installed in a new location. Security of data files and equipment is critical and we are complying with the Computer Security Act of 1987, Public Law 100-235. We published the Coast Guard Automated Information Systems Security Manual on 24 July 1987 and the Standard Workstation Security Handbook on 26 August 1989 to cover these areas in detail.

Most of the legitimate problems identified in the April 1990 GAO audit were ones we had already identified and were well along in resolving. We have issued a directive giving funding priority to crossfunctional systems (which share information across programs). In the next three years, we will rewrite and improve most of our current major information systems including the Law Enforcement Information System (LEIS), the Marine Safety Network (MSN), and the Automated Mutual-Assistance VEssel Rescue (AMVER) system. Such efforts will improve the ability of our units to have access to more timely and accurate information as discussed in the GAO report. We are also developing a strategic Information Resource Management (IRM) plan. As for hardware, we awarded a new standard workstation contract in July, 1988. We have purchased more than 10,000 workstations from this contract and have state-of-the-art user systems at all units. We are involved in the Navy's super minicomputer procurement with award in FY91 for purchasing replacements for our aging minicomputer inventory.

SENATOR LAUTENBERG: Is it true that, in many cases, a Coast Guard unit, in deciding whether or not to board a suspicious vessel, can not check out all past information from the law enforcement systems regarding that vessels?

ANSWER: Yes. It is for this reason that the Law Enforcement Information System II (LEIS II) project is being undertaken. LEIS II will allow field units to rapidly retrieve critical law enforcement information from the Coast Guard and other agencies' databases. A critical element of the problem deals with actual transmittal of the information from its source to the unit at sea. Various means are under consideration, including use of satellite and/or High Frequency (HF) datalink systems.

SENATOR LAUTENBERG: Is it true that you cannot quickly access data on the number or types of violations in the Marine Safety area?

ANSWER: No. Information pertaining to violations in the Marine Safety program is recorded in the Marine Safety Information System (MSIS). The data recorded include vessel information, responsible party information, and specifics of the violation, among other things. Violation histories of specific vessels can be accessed in minutes from over 130 Coast Guard offices worldwide.

While MSIS itself cannot be easily queried to pose ad hoc questions relating to an entire fleet or type of violation, a quarterly extract from MSIS is available for this purpose. Typically, data for a given quarter are available within three months of the end of that quarter. Once the data is available, typical queries take between 30 minutes and three hours to complete, depending on the complexity.

SENATOR LAUTENBERG: Are the computer capabilities standardized between all of the Coast Guard's areas and districts for all programs?

ANSWER: We have a tremendous degree of standardization in our computing capabilities. We have standard workstations at every unit operating standardized software including word processing, database management, spreadsheet and electronic mail programs. There are limited numbers of nonstandard workstations satisfying specific needs not addressed by our service wide contract and for connectivity to DOD systems that we are required to use. These non-standard workstations represent approximately 5% of our inventory. The Navy's super minicomputer procurement (AFCAC 300), in which we are participants, will serve to help standardize our minicomputer inventory.

For the past two years, the Coast Guard has been implementing an ADP architecture known as the Distributed Computing System (DCS). This architecture consists of a standard suite of hardware, software, and telecommunications capabilities installed in each of the ten District Offices and at both Maintenance and Logistics Commands (MLC). This architecture provides the capabilities to access and share data stored on District Office/MLC standard workstation systems. When connected to a wide area network, the systems will allow for intra-District sharing of data. Additionally, the network architecture allows for centralized system/network management of all District Office/MLC workstations.

POLAR ICEBREAKER

SENATOR LAUTENBERG: At the beginning of this year the President set up a deferral for your Polar Icebreaker which has been financed through the Navy. Since then, the President has

rescinded all these deferrals while the Congress was on the verge of formally disallowing them. The Congress also appears to have adjusted the amounts available for the acquisition of the icebreaker. What is the current status of the icebreaker acquisition?

ANSWER: The specification for the Polar Icebreaker Replacement (PIR) has been completed and the Navy is preparing a contract package. A program office including five Coast Guard members and a Coast Guard Officer as project manager has been established at the Naval Sea Systems Command (NAVSEA) to manage the project.

In the Conference Report (H. REPT. 101-493) which accompanied the Dire Emergency Supplemental Appropriation Act, 1990 (P.L. 101-302), the House and Senate Committee on Appropriations approved a transfer of funds, within the Department of Defense, of $50 million from the FY 1990 appropriation for one icebreaker to address funding shortfalls for CHAMPUS. In the Report language, the conferees requested a report from the Coast Guard and Navy by August 15, 1990, that addresses additional icebreaker funding requirements for specific outfitting and defense related features. The $274 million in the Navy's SCN account is enough to award a contract for construction.

SENATOR LAUTENBERG: As you know, a report must be submitted by the Administration on actual icebreaker requirements before this acquisition can proceed. Should we expect any surprises in the mandated report? Will the report continue to indicate the need for at least one additional icebreaker?

ANSWER: We cannot predict the contents of a Presidential Report. We have submitted to the administration those portions of the report for which we are responsible. Other agencies must make input as well.

As you are aware, numerous previous studies have stated the need as greater than the two icebreakers which the nation currently operates. In 1990, the President's budget contained a request for a third polar icebreaker, and Congress appropriated the funds.

SENATOR LAUTENBERG: Is the NSF going forward with its plans to acquire its own icebreaking capability?

ANSWER: Yes. On 26 February this year NSF announced the signing of a contract for the construction and ten-year leasing of a 300 foot ice-capable research vessel. The $83.8 million ship will be constructed by Edison Chouest Offshore Inc. of Galliano, Louisiana. The vessel is designed to break 3 feet of ice continuously at 3 knots; existing Coast Guard polar icebreakers have twice that capability.

BOAT SAFETY GRANTS

SENATOR LAUTENBERG: For FY 1991 the President's budget proposes providing $30 million in grants to states and territories to promote recreational boating safety (about the same as in FY 1989 and FY 1990). How does the Coast Guard know what it will be accomplishing through the Boating Safety grants? How recent was the assessment and what did it show?

ANSWER: The Boating Statistics Report for FY 1989 was published in June 1990. It shows that the recreational fatality rate reached a record low of 5.0 fatalities per 100,000 boats in 1989. That was the fourth year in a row of reduced fatalities. Several years ago we had set a fatality rate goal of less than 6.0

by 1990. The success is due in large measure to increased State efforts. State boating safety programs have steadily increased in scope and sophistication. Boat Safety Account funding has had a direct bearing on State program improvements, and in turn the improved safety record. We have no doubt that continued Boat Safety grants to States will result in continued improvements. The Coast Guard recently added additional personnel to oversee State programs, including the assessment of State grants.

SENATOR LAUTENBERG: What has it done since GAO's 1987 report to improve the Coast Guard's ability to assess and compare the effectiveness of state recreational boating safety programs and evaluate their contributions to boating safety?

ANSWER: We added four people to the State Affairs Branch last July to provide oversight and evaluate State programs. Their training has taken time. They attended the National Boating Safety Course, learned the State financial assistance process and procedures, learned related statutes and regulations, and attended State boating law administrator conferences. They also participated in the fiscal year 1990 State grant process. The new people will soon begin visiting states and collecting and analyzing data to find out if there are problems to be addressed and to determine what programs are having a positive impact. We will share problem-solving information with States having similar problems, and success stories with all States.

SENATOR LAUTENBERG: Does the $200 million estimated revenue represent the full potential for fee-derived revenues in the Coast Guard, or just a portion of what is viewed as possible? If the latter is the case, why and how was $200 million settled upon as the initial revenue target? What do you see as the ultimate potential user fee revenue (i.e. assuming all services for which fees could justifiably assessed were to be put in place in FY 1991)?

ANSWER: The $200 million estimated revenue is a portion of the fee-derived revenue which might be justifiably assessed. The current legislative proposal is modeled upon H. R. 1765 which was introduced by Representative Silvio Conte on March 24, 1987. It would remove the current prohibitions which exist in section 2110 of title 46 against charging for the inspection and examination of vessels and the licensing, certification or documentation of marine personnel. User fees for these functions would equate to approximately $35 million per year. The bill would also establish an annual charge of $25 applicable only to U.S. vessels and undocumented barges which are operated on U.S. navigable waters resulting in collections of approximately $165 million annually. Due to the time required to implement the collection process, the amount of revenues which could be collected in FY 1991 depends on the time the proposed legislation is passed.

SENATOR LAUTENBERG: How does the Coast Guard intend to support the particular fees it is proposing to charge for various services? Specifically, what personnel (FTE) and monies are in the base to manage the fee collections?

ANSWER: There are currently no monies in the base to manage fee collections. We are anticipating that the $25 annual fee for recreational boats and U.S. commercial vessels would be collected by the U.S. Postal Service. About 30 FTE would be required to collect the inspection, documentation and licensing fees. The total cost of collection for all the proposed fees is projected to range in the area of four to five million dollars. This includes the costs of FTE, reimbursement of expenses incurred by the U.S. Postal Service, printing and distribution costs, computer related expenses, and costs related to the establishment of collection, audit and enforcement mechanisms. If the user fee proposals are enacted, the Coast Guard intends to request the necessary funding and FTE through the budget process.

SENATOR LAUTENBERG: Do you have current program cost data or cost estimating methodologies which will convincingly demonstrate a relationship between the costs of providing these services and the fees that are proposed to be charged for them?

ANSWER: Yes, data exist to demonstrate the relationship between the costs and the proposed charges. Data contained in the Coast Guard's Search and Rescue (SAR) and Waterways Aids-to Navigation Management System (WAMS) data bases were employed in conjunction with the Operating Expenses Budget to allocate the costs of search and rescue and short-range aids to navigation among different users or user groups. The Marine Safety Information System (MSIS) was used to develop costs related to vessel inspection and documentation and marine personnel licensing.

SENATOR LAUTENBERG: How would you respond to those boaters or vessel owners/operators who argue that they should not have to pay in advance (e.g., through purchase of a boat decal) for Coast Guard services that they may never avail themselves of? To those who argue that they already pay for Coast Guard services through income taxes and through excise taxes on motor fuel for their boats?

ANSWER: It has been a long-standing federal policy to charge a fee for many of the services which benefit specific recipients rather than the general public at large. Recreational boaters and commercial water transportation are currently receiving a subsidy from the Federal government. Establishment of the proposed user fees would shift payment of the costs of providing certain Coast Guard services from the general taxpayer to those individuals or user groups who stand to receive the benefits of those services. Those who argue they should not have to pay in advance for the purchase of a decal may recognize the lack of administrative feasibility with respect to charging for search and rescue, aids to navigation and many marine safety services on a case-by case basis. An individual search and rescue case can cost the Coast Guard several thousand dollars, particularly when a search is required. It is also not feasible to charge a vessel each time it passes a Coast Guard aid-to-navigation, such as a buoy, since extraordinary costs of collection would be required. Nevertheless, these services are available to those who operate a vessel on U. S. navigable waters. Those who argue that they already pay for Coast Guard services through income taxes may recognize that the millions of citizens who also pay income taxes, but are neither recreational boaters nor engaged in the business of transporting products for a profit, do not have their recreation or their right-of-way subsidized by the Federal government. Those who argue that they already pay for Coast Guard services through excise taxes on motor fuel for boats may not be aware that the proposed fees would collect less than half the amount the Coast Guard spends annually on services for which recreational boaters receive the benefits. If the fees in the proposed legislation were established, these Coast Guard annual expenditures would continue to exceed the combined estimated amount recreational boaters would pay for user fees ($165 million) and gasoline taxes ($120 million).

FIELD REALIGNMENT

SENATOR LAUTENBERG: GAO has examined the reorganization that the Coast Guard undertook in 1987 to realign field management and support. GAO has identified several problems. Two district offices were eliminated, and maintenance and logistics support functions were consolidated for districts within their respective areas (Atlantic and Pacific). In total, the reorganization was supposed to free up approximately 500 support billets which would then be reprogrammed to operations. The Chief of Staff told GAO in August 1989 that the field reorganization had a negative impact on morale and that only between 350 and 420 billets had been saved or reprogrammed to operations. Has the Coast Guard conducted a formal assessment of the results of the reorganization ("Gilbert I" and "Gilbert II")? If so, did the reorganization have the intended results? How many billets were actually reprogrammed to operations as a result of the organization?

ANSWER: The Coast Guard performed an assessment of the field reorganization one year after initial implementation. Comprehensive input from operational field commanders and commanders of the newly established support components formed the basis of the assessment and response. Some of the concerns raised were handled through identifying and reordering priorities of field responsibilities. Other concerns were and are being resolved through adjustments to functional responsibilities and/or reallocation of resources. Nearly all of the adjustments that have been made are considered minor in nature. Generally, the reorganization has accomplished its original intent: (1) consolidate support functions, freeing billets for reprogramming and, (2) allow operational field commanders to concentrate more completely on services to the public. The Chief of Staff's estimate of the actual number of billets reprogrammed to operations was made while the bulk of the adjustments to the organization were being considered. Those have now been accomplished. The field realignment originally yielded approximately 485 billets for reprogramming to operations. After adjustments to date, approximately 430 billets have been reprogrammed to operational functions.

SENATOR LAUTENBERG: Prior to the realignment, the Coast Guard's decentralized structure supported a strategy of quick response to the public, efficient use of resources, and flexibility of management. In fact, decentralization was often cited as a source of the Coast Guard's energy and creativity in allowing its senior officers greater proximity and response to the public. Has the field restructuring, resulting in a more centralized support structure, had a negative impact on the efficiency of field operations? Is it true, as has been reported, that many of the functions reassigned under the realignment "crept back" to the districts without accompanying resources?

ANSWER: The efficiency of Coast Guard field operations remains high. The new organization has built on the attributes of quick response to the public, efficient use of resources, and flexibility of management. By centralizing support functions, our senior operational field commanders can now concentrate more effectively on operations and their interface with public and private entities. They also retain their proximity to their operating units and the public they serve. The current organization remains nearly the same as the originally implemented reorganization plan. Some adjustments have been made in response to legitimate concerns over functional assignments and associated resources. The field organization will continue to be reviewed and necessary alterations will be made where needed, but the organization is working well and is responsive to service and national needs.

SENATOR LAUTENBERG: Gilbert I introduced major changes to the Coast Guard planning process. Resource planning was regionalized, which removed planning officer billets from the districts. There are some concerns that these positions should be restored because of difficulties encountered by individual units that now lack the requisite planning expertise. Districts also lost funding flexibility, as a considerable portion of operating funds and all of maintenance funds were shifted to the areas. How has the new organizational structure affected planning and resource control?

ANSWER: The new organizational structure has affected many aspects of the Coast Guard's administration of its support programs. The quality of service to the public has remained at least as high as before the reorganization and in many aspects is more efficient than before. The benefits of consolidating support functions, allowing the District Commanders to focus more on operations and liaison with public and private sector entities, outweigh any disruption caused by short-term adjustments that may have been required.

Significant organizational change usually requires some adjustment to respond to unforeseen ramifications or unanticipated need. Field commanders evaluated the new support organization for a year and then made suggestions for change. The restoration of dedicated planning officers to the districts was a prevalent suggestion. The district planning officer was found to be a position essential to good, consistent planning at the district level. Increased span of control and the more remote location of the planning function did not serve the agency well when located at organizational levels higher than the district commands. Therefore, planning officer billets were restored to each district staff last summer.

The philosophy on resource allocation and control has changed under the new organization. Most maintenance funding now resides at the two regional Maintenance and Logistics Commands (MLC) while most operating funds continue to be allocated and controlled at the District Commander level. The ongoing determination of the most efficient way to reallocate those resources is a dynamic process which requires close coordination between operational and support commanders. The Area Commanders ensure the proper coordination within their Area and can balance conflicting requirements since the District Commanders and the Maintenance and Logistics Commander report to them. No extraordinary difficulties have occurred. The realignment of management and support functions in the Coast Guard has been a positive step.

PROGRAM EVALUATION -- MEASURES OF EFFECTIVENESS

SENATOR LAUTENBERG: The Coast Guard reported to OMB in September 1988 that it had added evaluation to its existing Planning, Programming, and Budgeting System (PPBS) as a means of better targeting its resources. According to Coast Guard documents, the new PPBES would refine the planning process by ensuring that programs are meeting their intended objectives. GAO and others have repeatedly recommended that the Coast Guard establish a performance measurement system to determine the efficiency and effectiveness of its programs. GAO found, however, that before the Coast Guard can carry out evaluation, it must first develop better measures of effectiveness for all programs. Has evaluation been integrated into the Coast Guard's planning and budgeting system? Are there now systematic program evaluations being conducted? If so, how are these results used in the budgeting process?

ANSWER: The Coast Guard has long used evaluation informally in its resource allocation system. The changes in 1988 attempted to formalize this use as part of the Planning, Programming and Budgeting System (PPBS). The changes to PPBS in 1988 were made with the expectation that it could take several years before evaluation would be fully integrated into the system and meaningful measures of effectiveness and efficiency could be developed for each program.

It has been difficult to build a systematic approach to using program evaluation for formal resource allocation in the Coast Guard. Our multi-mission, multi-resource environment, coupled with budgetary fluctuations, have added to the difficulties experienced by our planning system. Our multiple-missions include: (1) programs which are hard to measure and interpret such as Search and Rescue (are we more or less productive in a year with a greater number of SAR cases?); (2) complementary programs (our Recreational Boating Safety Program is a preventive program designed to educate boaters and to provide incentives for safe boating, while our Search and Rescue Program is a curative program, designed to save lives and property after an accident has occurred); (3) preventive programs such as Marine Environmental Response (how can we measure the amounts of hazardous materials not spilled on U.S. waters because of boating documentation, inspection and licensing and their associated regulations?); (4) deterrent programs such as Drug Law Enforcement (how do we measure the quantity of drugs not shipped and how does this relate to our previous enforcement efforts?); and finally, (5) readiness programs (how can we measure Coast Guard readiness to respond to National Emergencies?). All of these programs present measurement problems. When all can be, and are, done interchangeably, using the same cutters, boats, aircraft and people, the problems are even more complex and compounded.

Although there are problems associated with the evaluation and measurement of Coast Guard programs, we are moving in the direction of overcoming these problems and establishing a base for improved evaluation. Simultaneously, we recently decided to adopt Total Quality Management, accepting systematic evaluation as an imperative to good management, and integrating its full use into our planning, programming, and budgeting activities. We are moving toward this goal by building an Information Resource Management (IRM) system that will be more responsive to the highest levels of management in the Coast Guard. The Corporate Data Base, now in its infancy but projected to be fully operational within the next 4 to 5 years, will allow the Chief of Staff and Commandant to access budget, accounting, resource, personnel and operational data through an integrated relational data base. These data will be useful for program evaluation, resource and other management decisions. We are also improving our major systems acquisition process and have integrated program evaluation throughout the system. We have recently published a Systems Acquisition Manual, formalizing the process to insure that program evaluation is considered during each step in major system acquisition from the early planning stages through delivery. Evaluations continue to be done on an as-needed basis throughout the Coast Guard. We have recently completed evaluations of Coast Guard boarding practices, travel claims processing, and correspondence processing. These evaluations are used to improve the way we do business and eventually reflect in improved quality of operations and budget savings.

In summary,, we have instructed program managers to develop measures of effectiveness and efficiency and have laid the foundation for these measures to be used in a fully integrated Planning, Programming, Budgeting and Evaluation System. Thus far, the system has produced mixed results, but we are working toward improving it. Systematic program evaluations are not yet being conducted. Although we are on the road toward systematic evaluations, we have not been completely successful as yet in overcoming the measurement problems described above. We are working to refine our planning and evaluation process and hope to report our successes to you in the near future.

SENATOR LAUTENBERG: Have all operating programs developed managerially useful measures of effectiveness? If so, how are the measures being reviewed for validity?

ANSWER: Although most of the operating program managers in the Coast Guard have measures of effectiveness (MOE), few are fully developed and managerially useful. When we first made changes to our planning system, we recognized that it would take 3 to 5 years to develop meaningful measures based on the difficulties discussed in the answer to the previous question.

Two programs which have developed meaningful MOEs are Search and Rescue (SAR) and Recreational Boating Safety (RBS). Those programs are in their initial stages of MOE implementation; at this point, validity checks are premature. The remaining programs are in varying states of MOE development.

PRODUCTIVITY IMPROVEMENT PROGRAM (PIP)

SENATOR LAUTENBERG: Has the Productivity Improvement Branch been successful in institutionalizing productivity improvement throughout the Coast Guard? Provide specific examples with productivity data.

ANSWER: We will implement Total Quality Management (TQM) throughout the Coast Guard within the next six months. Many organizations, private and public, have shown that when quality improves, productivity improves. We believe that institutionalizing TQM will institutionalize productivity improvement throughout the Coast Guard.

The Productivity Improvement Branch has been the catalyst for beginning the Coast Guard's Total Quality Management effort. We have executed a substantial marketing effort to sell Total Quality Management concepts within the organization. We have given many high-level briefings and trained 36 flag officers. We have established Process Action Teams within the organization to improve processes within the Coast Guard. Additionally, we have accomplished the following:

1. Complete revision of the old suggestion program. The new system, entitled "Idea Express", is designed to operate as a profit

center for the Coast Guard by increasing productivity through the implementation of ideas from employees to increase effectiveness and efficiency. The new program has streamlined the administration and evaluation processes, increased top management involvement and provided bigger incentives for employees to participate. In all of 1989, the former suggestion program received approximately 500 suggestions Coast Guard-wide. In the past six months, the new program has generated 1500 suggestions.

2. Establishment of a Model Unit Program as an experiment to discover and test better ways to accomplish Coast Guard missions. The experiment allows designated Model Unit Commanders to request waivers from existing agency rules to allow for testing new approaches to getting work done. To date, there are six Model Units: Group Port Angeles, Washington; Group Mobile, Alabama; Group Southwest Harbor, Maine; Marine Safety Office Port Arthur, Texas; Reserve Training Center, Yorktown, Virginia; and Air Station Cape Cod, Massachusetts. These units are testing different ways of handling household goods transportation, disbursements for personal emergencies, and transfer of funds between organizations for cooperative projects.

3. Implementation and management of a Productivity Improvement Fund (PIF) designed to provide venture capital outside of the normal budget process to finance cost saving productivity enhancing initiatives. This fund has provided rapid financing for such projects as the conversion of district communications networks from dedicated landlines to a public data network, conversion of the Coast Guard Institute automated data processing software to the Coast Guard standard workstation, the automation of the training account, and the replacement and upgrading of the computer system at the Pay and Personnel Center.

4. Our participation in the federal Productivity Improvement Program (PIP) has expanded its coverage from 242 FTE in FY88 to 13,200 in FY90.

SENATOR LAUTENBERG: Is the Coast Guard now submitting proposed initiatives encompassing entire programs or just segments?

ANSWER: We were advised in November 1989 by the Office of Management Planning in the Office of the Secretary of Transportation that the Office of Management and Budget was rewriting Circular A132 and that all reporting requirements would be suspended until further notice. This covered the Productivity Improvement Program (PIP) Quarterly Reports, Annual Reports, and development of any new initiatives for submission. As per the above guidance, and until the revision of Circular A132, no new initiatives will be reported.

SENATOR LAUTENBERG: Given that only three of the Coast Guard's 14 operating programs were included in PIP as of July 1989, will the Coast Guard meet the 1991 target for having all of its programs included in PIP?

ANSWER: No. We are waiting for defined criteria and guidance from OMB on submitting productivity initiatives for the federal inventory. We are in the process of reassessing the operational programs in our inventory by: (1) reassessing our Planning, Programming, and Budgeting System to make Evaluation an integral part of our resource allocation procedure. The anticipated result will emphasize the need for useful, understandable program measures of effectiveness requiring every Coast Guard operating and support program to establish meaningful program outputs that can be evaluated against program goals, (keeping in mind that this is a long term process); (2) developing billet and position inventory criteria for quality and productivity initiatives; and (3) developing the inventory criteria that will eliminate double counting resources which results from our current process of allocating resources associated with general support throughout the Coast Guard (keeping in mind that this is also a long term process).

In summary, well designed and properly used measures of efficiency and effectiveness can provide the resource optimization tools that we need to achieve the greatest impact for each dollar we spend. We are starting a top down approach to integrate quality and productivity into the day-to-day operations of the Coast Guard.

HH-60J HELICOPTERS

SENATOR LAUTENBERG: What is the base for the operation of HH-3F helicopters that are being replaced by the HH-60J helicopters?

ANSWER: There are 35 HH-3E/F allowances in the Coast Guard inventory. Each allowance is funded for $785,000 per year plus 20 FTE. Therefore, the base for HH-3E/F helicopters, in FY 1991 dollars, is $27,475,000 plus 700 FTE.

SENATOR LAUTENBERG: Provide the phase in/out schedule through 1993 for the HH-3F/HH-60J helicopters.

ANSWER: The following is the current phase in/out schedule through 1993 for the HH-3F/HH-60J helicopters:

	HH-60J PHASE IN		HH-3F PHASE OUT	
UNIT	BEGIN	END	BEGIN	END
ATC MOBILE	SEP 90	JAN 91	JUN 93	JUL 94
AIRSTA ELIZABETH CITY	FEB 91	AUG 91	JUN 91	AUG 91
AIRSTA SAN FRANCISCO	MAY 91	OCT 91	SEP 91	OCT 91
AIRSTA CAPE COD	AUG 91	FEB 92	JAN 92	FEB 92
AIRSTA KODIAK	FEB 92	AUG 92	JUN 92	AUG 92
AIRSTA SITKA	MAY 92	OCT 92	AUG 92	OCT 92
AIRSTA CLEARWATER	OCT 92	JUL 95	FEB 93	JUL 95
AIRSTA TRAVERSE CITY	JAN 93	JUN 93	APR 93	JUN 93

SENATOR LAUTENBERG: If the HH-60J helicopters are one for one replacements for the HH-3F helicopters, the infrastructure that supports the HH-3F should be drawing down as the HH-60J comes into service. Discuss this conversion and how it affects resource needs.

ANSWER: The HH-3F infrastructure will be converted to HH-60J support as the replacement program progresses. However, the total support does not change on a one-for-one basis as each aircraft conversion take place. Aircraft support infrastructures consist of variable and fixed expenses. The variable portion will change incrementally as HH-3Fs are replaced by HH-60Js. Examples of variable charges include fuel, spare parts consumption, and direct maintenance manhours per flight hour. The fixed portion of the support infrastructure at the depot level will reduce only after all HH-3Fs are retired. Some fixed expenses are, of course, step functions that will reduce after a certain number of HH-3Fs are retired. An example of the step function expense is the number of instructors required to support HH-3F training.

SENATOR LAUTENBERG: The $3.53 million for HH-60J aircraft Maintenance and Operations follow-on appears to be for only seven of a total of 32 helicopters scheduled for delivery through mid-1993. Can we expect similar request every year through FY 1993? At what point do resources and operating expenses for the HH-3F become available for the operation and maintenance of the HH-60J?

ANSWER: The request is a net increase in operating cost of the HH-60J over the HH-3F. The $3.53 million for HH-60J Aircraft Maintenance and operations follow-on is the first phase of a multi-year follow-on request. This request will fund the aircraft that are being implemented in FY 1991. Additional follow-on funds are required for each existing Medium Range Recovery (MRR) allowance because of the difference in operating costs between the HH-3F and HH-60J. Follow-on funding requests will cease upon full implementation of the HH-60J when the base funding has reached full adjustment for the difference in operating costs between the two aircraft.

SENATOR LAUTENBERG: The $2.759 million for the HH-60J/HH-3F Personnel Requirements is a request for interim resources (79 FTE) for support and training--for the period FY 1991-1993 for deployment of new helicopters at 7 air stations. In FY 1991 only two air stations--ATC Mobile and AIRSTA Elizabeth City, NC will receive HH-60J. Why are all 79 FTE needed in FY 1991? How many will be assigned to each air station? Why can't resources previously assigned to HH-3F be redirected to HH-60J activities in phases?

ANSWER: Both the HH-60J and the HH-3F will be operated simultaneously until FY93. The 79 HH-60J FTE will be assigned as flight instructors and maintenance personnel for the Aviation Training Center (ATC) Mobile and maintenance instructors for the Aircraft Technical Training Center (ATTC) Elizabeth City. The instructors will provide flight and maintenance training for approximately 150 pilots and 475 field maintenance personnel over the implementation period. Both ATC and ATTC will be fully operational with the HH-60J during the first quarter FY91; therefore, the entire 79 FTE will be required.

Because the HH-3F will continue to support OPBAT through FY93, a cadre of personnel will be required until the last HH-3F is retired. The HH-60J implementation plan calls for those personnel supporting the HH-3F to be phased out as their workload diminishes after FY93.

SENATOR LAUTENBERG: The description of the problem for the AC&I request for HH-60 MRR replacement program follow-on (p.79) does not address reasons for specific request. Provide more information on nature of engineering change orders, training devices, support equipment, and "related" support services required.

ANSWER: Engineering change orders include those monies necessary for incorporation of fuel boost pumps, HF antennas, improved searchlight, Global Positioning System (GPS), improved main gearbox, improved fuel control, and improved fuel system electrical harness. These changes will be applied to those aircraft that can be reached in forward fit, plus whatever retrofits are required.

Training devices include Automatic Flight Control System (AFCS) Trainer, Avionics System Trainer, T-700 Engine Cutaway Trainer, Main Rotor Blade Cutaway Trainer plus trainer spares, data, and support equipment.

Support equipment refers to aircraft support equipment in general and to depot support equipment in particular. Examples of depot-level support equipment are engine test standards, ASM-614 Avionics Automatic Test equipment, and hydraulic test bench equipment. Additionally, those airframe-peculiar jigs/fixtures necessary for structural repair beyond the unit's capabilities will be placed in the depot inventory. Unit-level support equipment has, to a large extent, already been procured. However, depot-level support equipment remains to be procured.

"Related" support services refers to those activities that provide engineering, technical, or logistic support for the HH-60J. For example, Naval Air Test Center (NATC) in Patuxent River, Maryland, provides extensive developmental test services on the aircraft, including the viability of Engineering Change Orders. Similarly, Naval Aviation Depots in San Diego and Pensacola, Naval Avionics Center (NAC), Naval Air Development Center (NADC) and others provide extensive support for software, support equipment requirements, and system safety.

SENATOR LAUTENBERG: Why weren't the items for the AC&I HH-60J follow-on request included in the initial procurement(s) and request?

ANSWER: Items in the follow-on request are functions of timing. Each aircraft takes about 30 months to manufacture. Therefore, some items, such as maintenance trainers or depot-level support equipment, could not be procured until after aircraft development. Furthermore, due to the nature of the option contract, procuring large quantities of support equipment, etc. up front could have proved wasteful in the event outyear option aircraft were not procured.

SENATOR LAUTENBERG: Are there further AC&I dollars required for the HH-60J project for the helicopters already bought? If so, describe, and quantify outyear costs. What are the full AC&I costs per helicopter and for the entire HH-60J fleet including follow-on and upgrades?

ANSWER: The last option for 8 helicopters was exercised in FY90, bringing the HH-60J total to 32. Funds will be required in FY91 ($34.3 million) and FY92 (currently estimated at $8.6 million) to finish deployment of the 32 HH-60J aircraft. The total planned acquisition budget for 32 HH-60J helicopters stands at $544 million including trainers, engineering changes, spares and support equipment. This equates to a total program cost of $17 million per helicopter. The total AC&I flyaway cost (direct cost of providing a fully operational helicopter) is approximately $10.8 million each, including engineering change proposals.

SENATOR LAUTENBERG: AC&I funding is requested for another 11 HH-60J helicopters for drug interdiction to support the OPBAT drug law enforcement mission. Does this request include those follow-on procurements such as those requested for the non-OPBAT HH-60J? For example flight recorders?

ANSWER: The 11 HH-60J helicopters for drug interdiction to support the OPBAT drug law enforcement mission will have the same equipment and configuration that are on or planned for the initial 32 HH-60J's. However, this FY91 AC&I request does not include any such follow-on procurements such as the flight recorder requested for the non-OPBAT HH-60J's.

SENATOR LAUTENBERG: What is DoD's anticipated role in OPBAT?.

ANSWER: The Department of Defense (DoD) provides the staffing and equipment for one of the three (soon to be four) Operation Bahamas, and Turks and Caicos (OPBAT) apprehension sites, located at Georgetown, Bahamas._ The Coast Guard staffs two other sites and a third site which will open later this fiscal year. The Coast Guard also mans the OPBAT Operations Center in Nassau.

DOD has no plans to expand their OPBAT role.

SENATOR LAUTENBERG: Will DoD be deploying their aircraft for OPBAT or could they deploy their aircraft in lieu of the Coast Guard replacing the HH-3F? If so, please provide anticipated aircraft hours for DoD and compare to Coast Guard aircraft hours for the past three years.

ANSWER: Continued Department of Defense (DoD) deployments in support of a single Operation Bahamas, and Turks and Caicos (OPBAT) site at Georgetown are anticipated. Expanded operations beyond this single site are not expected. It should be noted that original OPBAT planning called for Coast Guard to replace DoD and Customs at three helicopter sites. The last DoD-supported site has remained in operation as the third Coast Guard site awaited start-up. Reinstitution of DoD-for-Coast Guard assets would mean reversing this process. The original rationale for the Coast Guard's particular suitability to execute this mission still exists.

The OPBAT mission is not exclusively focused on anti-air smuggling. In fact, typically it involves air-drops to vessels. The Coast Guard, having operated in anti-surface smuggling operations (and in the Bahamas on a cooperative basis with the Bahamian government for years) is organizationally and operationally equipped to address this problem.

The Coast Guard does not have data on DoD OPBAT flight hours. Coast Guard OPBAT flight hours for the past three years are:

FY 1988	FY 1989	FY 1990 (THROUGH 2ND QTR)
1,388 FLT HOURS	2,247 FLT HOURS	1,422 FLT HOURS

SENATOR LAUTENBERG: What would be the impact of delaying procurement for the 11 OPBAT HH-60J helicopters one, two or three years?

ANSWER: A delay would mean that the old HH-3Fs would be operated beyond projected service life. This could lead to increased maintenance costs and decreased mission availability. While the aircraft would be maintained to the highest degree possible, safety of flight would be an increasing concern as the aging airframes and engineering systems become more susceptible to fatigue related catastrophic failure.

For every year the procurement is delayed, a similar break in production would result. A break in production would add significant non-recurring engineering costs for resetting the unique tooling and production processes peculiar to the HH-60J model. The unit cost per airframe would then increase.

SENATOR LAUTENBERG: If there are only eight HH-3F helicopters presently assigned to OPBAT why is this request for eleven replacement helicopters?

ANSWER: There are presently nine HH-3F helicopters assigned to Operations Bahamas, Turks and Caicos (OPBAT). The request for eleven replacement helicopters is necessary to replace these nine operational allowances and have two airframes in the support line.

These two additional airframes will ensure that there are always nine airframes for deployment when two of the OPBAT helicopters are undergoing depot level maintenance.

SENATOR LAUTENBERG: What is the dollar cost per flight hour for the HH-60J helicopter? How is this cost computed? Provide a breakdown including pilot and air crew, fuel, overhead and maintenance. How much of the maintenance cost is labor and how much is replacement parts?

ANSWER: The dollar cost per flight hour for the HH-60J is $1,319. The cost is computed utilizing Navy operating costs for the SH-60B without the Department of Defense (DOD) particular equipment such as Anti-submarine Warfare (ASW) equipment. Since the Coast Guard has not implemented this aircraft yet, this is the most reliable data on which the Coast Guard can base its estimates. Personnel costs are computed using existing staffing standards for Medium Range Recovery helicopters. This equates to three pilots and seventeen aviation enlisted personnel per funded operational allowance. The exact personnel cost is dependent upon how many airframes are at a particular unit because there are economies of scale present with increased numbers of airframes. The following is a breakdown of the hourly flight hour cost:

Fuel	- $154
Depot Level Maintenance	- 954
Unit Level Maintenance	211
	$1,319

At our Aircraft Repair and Supply Center, where the depot level aircraft maintenance is accomplished and most parts and consumables are purchased, approximately 14% of all funds are expended towards labor and 86% towards parts and consumables.

FLIGHT RECORDERS

SENATOR LAUTENBERG: What is the full cost of equipping all Coast Guard aircraft with Aircraft Cockpit Voice/Data Recorders?

ANSWER: The total AC&I funding need for this multi-phase project is $21.2 million (FY91$). This provides for Aircraft Cockpit Voice/Data Recorders (CVR/FDRs) in all HH-60Js, HH-65s, HU-25s, FDRs in the two executive aircraft (Gulfstream I and Gulfstream II), and necessary spares. The cost to equip the 31 HC-130s with CVR/FDR is $2.6 million. The total cost to equip all Coast Guard aircraft with CVR/FDRs is $23.8 million (FY91$).

SENATOR LAUTENBERG: Are any aircraft now equipped with cockpit data recorders or similar systems?

ANSWER: There are two parts to the system we are requesting: the Cockpit Voice Recorder (CVR) and the Flight Data Recorder (FDR). Twenty C-130s have (CVR/FDR) systems installed. In addition, the Coast Guard's two executive aircraft, the Gulfstream I and Gulfstream II, each have a CVR.

SENATOR LAUTENBERG: Once Phase III of the project is complete to install the voice/data recorder systems will all aircraft be so equipped?

ANSWER: Yes, at the end of Phase III all Coast Guard aircraft will be equipped with Cockpit Voice Recorders/Flight Data Recorders (CVR/FDRs).

SENATOR LAUTENBERG: What provisions have you made to analyze the data? (i.e. costs, legal actions, etc.)

ANSWER: Aircraft Cockpit Voice Recorders/Flight Data Recorders (CVR/FDRs) data will be analyzed by the Aircraft Mishap Analysis Board (MAB) in the course of an investigation. The MABs are funded to conduct all matters relating to aircraft investigations as they occur.

AIR FACILITY CHARLESTON

SENATOR LAUTENBERG: To operate Air Facility Charleston personnel resources (37 FTE) would be added to the staff of AIRSTA Savannah (except for one FTE at Charleston), to support the one helicopter on standby status "B-0" at Charleston. Two helicopters will be added to AIRSTA Savannah to maintain the one ready helicopter at Charleston. Why is it necessary to add 2 helicopters to maintain one ready helicopter?

ANSWER: Two helicopters will be added to Air Station (AIRSTA) Savannah for a total of five Search and Rescue (SAR) helicopters to provide two ready helicopters, one at AIRSTA Savannah and one at Air Facility (AIRFAC) Charleston. Normally, three aircraft would be provided to an air station to maintain a one aircraft ready status. By basing out of AIRSTA Savannah we gain some economies of scale but must not degrade the SAR response capability in the area. Using a standard planning factor of a 29% Not Mission Capable (NMC) rate, the probability that one SAR aircraft is available out of three (AIRSTA Savannah's present allowance) is .976. The addition of only one aircraft and one additional ready requirement (AIRFAC Charleston) would degrade the availability - the probability of having two SAR aircraft out of four is only .924. The difference of 5.24% is considered significant. Based on current AIRSTA Savannah statistics and SAR simulations for the combined Savannah-Charleston operating area, such a reduction in readiness could result in 7 lives lost per year. The addition of two aircraft maintains a probability of having two ready aircraft of .973.

SENATOR LAUTENBERG: Thirty-seven FTE to maintain two additional helicopters at AIRSTA Savannah equates to 16.5 FTE per helicopter. What is the typical FTE per helicopter? Are there no economies of scale as the operating fleet at Air Station Savannah increases?

ANSWER: The 37 Full Time Equivalents (FTE) requested for Air Facility (AIRFAC) Charleston are comprised of 10 pilots, 21 enlisted and six general detail. Of the 21 enlisted, one is a support billet. Thus, 10 pilots and 20 aviation enlisted are available to crew and maintain the two additional aircraft that are required to meet the one additional Bravo-Zero ("B-0") standby requirement. Based on measured work alone, the required FTE per HH-65 helicopter is two pilots and 10 enlisted, or four pilots and 20 enlisted total for the 2 additional helicopters. Additionally, based on the duty standing requirements for a "B-0" aircraft (two pilots and one aircrew on immediate standby around the clock), the required FTE for the facility is 10 pilots and five enlisted. Both the minimum measured work requirements and the minimum duty standing requirements must be met simultaneously. Therefore, 10 pilots and 20 enlisted are required at AIRFAC Charleston, in addition to the seven support and general detail personnel.

SENATOR LAUTENBERG: If the Charleston facility will be built in FY 91 why are all the FTE required in FY91?

ANSWER: Operations at Charleston are mandated by Congress to commence on 1 October 1990. An interim facility will be used to support operations at Charleston until a permanent facility can be completed. The requested billets are needed to support aircraft operations regardless of the type of facility.

SENATOR LAUTENBERG: The statement in the budget request (p. 36) that there are no funds in the base implies that AIRSTA Savannah will not experience a reduced workload. Please explain. What was the workload in the area served by AIRSTA Savannah FY 1986-1989 and what is the anticipated FY 1991, FY 1992 and FY 1993 workload of AIRSTA Savannah.

ANSWER: Air Station Savannah may experience a reduced search and rescue (SAR) workload, but the number of personnel required for both Air Station Savannah and Air Facility Charleston are based upon a measured work concept to provide a 24 hour, year round, all weather SAR service at each location. The number of personnel required at Savannah and Charleston are determined by the number of aircraft required to maintain that readiness capability. The 1986-89 workload (SAR cases) in the area served by Air Station Savannah was as follows:

	1986	1987	1988	1989
SAR cases	194	211	108	159
# of sorties	291	328	135	229
time on sortie	495.2	514.2	360.8	353.2

During FY 1991 through FY 1993 it is anticipated Air Station Savannah's SAR case load will decrease by 35%; the combined Air Station Savannah/Air Facility Charleston workload will likely remain comparable to Air Station Savannah's historical average.

SENATOR LAUTENBERG: How much of the $2.7 million to establish Air Facility Charleston will be used to upgrade the AIRSTA Savannah facility to handle the additional two helicopters and 36 FTE to be stationed at Savannah?

ANSWER: Air Station Savannah facility modifications, related site development and office/shop outfitting, would cost $440,000.

SENATOR LAUTENBERG: From where are the two new helicopters to be assigned at AIRSTA Savannah?

ANSWER: We will use two existing crash attrition HH-65A aircraft to support Air Facility Charleston.

SENATOR LAUTENBERG: What are the full start up costs for Air Facility Charleston? What will the recurring operating and maintenance costs be?

ANSWER: The start up and operating/maintenance (O+M) costs associated with Air Facility Charleston over and above the $2,700,000 for Air Facility Charleston facility construction, Air Station Savannah facility modifications and the personnel costs associated with the 37 Full Time Equivalent (FTE) are as follows:

	FY90	FY91	FY92 (IN FY91$)
SHORE FACILITIES			
Charleston			
Interim	$25,000 (4 months)	$6,900	---
Permanent	---	---	$157,000 (recurring)
Savannah			
Interim	$3,000 (4 months)	$3,600	---
Permanent	---	---	$30,000 (recurring)

AIRCRAFT O+M COSTS	$326,900 (2 months)	$1,603,470	$1,603,470 (recurring)
TOTALS:	$354,900	$1,613,970	$1,790,470

HH-65A HELICOPTERS

SENATOR LAUTENBERG: Please explain the relationship between the request for $2.759 million for HH-65A Aircraft Maintenance and Operations Follow-on (P.38) and the request for $7.7 million AC&I HH-65 supplemental spares-phase II (P.80). Both speak to increasing flight hours. Please explain. Why are both necessary?

ANSWER: The operating expenses request for $2.759 million for HH-65A Aircraft Maintenance and Operations Follow-on is to support an increase in funded flight hours in the HH-65 operational fleet from 635 hours to 645 hours. These funds are necessary to support the incremental cost increase for fuel and maintenance costs due directly to increasing programmed flight hours. These funds would increase the recurring base for the HH-65 helicopter.

The Acquisition, Construction, and Improvements request for $7.7 million for HH-65 Supplemental Spares Provisioning, Phase II is to provide additional pipeline spare parts for the HH-65. The initial sparing plan for the HH-65 was based on forecast parts failure, repair, and replacement rates. Actual Coast Guard operation of the aircraft has shown that the initial outfitting spares are not adequate to support our goal of 71% availability at the target programmed flight hours. These funds are nonrecurring.

Both funds are necessary to achieve long term improvement in the HH-65 availability while increasing programmed hours. The acquisition funding provides the parts base (number of spares) necessary to support the aircraft parts repair and replacement pipelines, and the Operating Expenses funds provide the annual support required to replace, repair, and maintain the aircraft and systems at the levels targeted.

SENATOR LAUTENBERG: The $2.474 million buy a 1.6% increase (635 to 645) in the number of flight hours per year. Is this still only 80% of the intended operating level of 800 hours per year? Do these figures include the 16 aircraft to support the overhaul line and attrition (i.e. are you assuming that you should be operating all 96 aircraft?)

ANSWER: The $2.474 million funds two new HH-65A allowances at 645 hours each for the Congressionally mandated Charleston Air Facility in addition to the 10 flight hour increase per aircraft per year for 70 other multi mission HH-65A operational allowances. This funding request will not increase the flight hour level of the eight special mission aircraft: four for Alaska fisheries patrol and four for polar operations, which are already operating at their programmed levels. The multi-mission HH-65s were procured with the intention of flying them 800 hours per aircraft per year. Including this request, the HH-65A operations and maintenance base will include funding for 80 operational aircraft (the eight special mission aircraft mentioned previously and 72 multi-mission aircraft at 645 hours each) plus OG-41 maintenance funding for the 16 support aircraft in the overhaul cycle.

SENATOR LAUTENBERG: Why was the initial provisioning for the HH-65A helicopters only 23.5% vice 30% per DOD guidelines? If related to unforeseen problems with the engines, is this being addressed in the negotiations with Lycoming?

ANSWER: Sparing was based on an in-house developed model using forecast parts replacement rates. Spares provisioning was intentionally left low to avoid purchasing parts that we felt would not be needed in the Coast Guard's operating environment. Our actual support experience has shown that the initial provisioning was short of the number of spares necessary to operate the HH-65A at the target availability and programmed hours rates. Unforeseen engine problems are a partial factor in the overall HH-65A spares shortage. However, the anticipated Lycoming support settlement will resolve the engine spares aspect of the HH-65A overall spare parts shortage.

SENATOR LAUTENBERG: Are further increases in provisioning for HH-65A spares anticipated? If so, when and how much? How will this improve these helicopters' operating levels? Will additional mechanics be required?

ANSWER: The actual level of Supplemental Spares Provisioning is closely tied to aircraft program hours. The spare parts pipeline must be able to accommodate increases to funded flight hours. If the base stock levels are not sufficient to support an increase in funded flight hours availability will decrease and/or programmed flight hours will not be achievable. Increasing the number of programmed and funded flight hours would affect our sparing needs. We have been increasing HH-65 program hours incrementally for several years now, and Coast Guard would like to continue that trend beyond FY 1991.

An aviation staffing study is in process to evaluate the appropriate number of mechanics required to support the HH-65. Completion of the study is expected in FY91.

SENATOR LAUTENBERG: What is the dollar cost per flight hour for the HH-65A helicopter? How is this cost computed? Provide a breakdown including pilot and air crew, fuel, overhead and maintenance. How much of the maintenance cost is labor and how much is replacement parts?

ANSWER: The dollar cost per flight hour for the HH-65A is $1243. The basis for the operating costs is actual costs incurred since the aircraft has been in the inventory. These costs include the actual fuel rate, costs incurred to maintain the aircraft at the home unit and cost to put the aircraft into programed depot maintenance. Personnel costs are computed using existing staffing standards for Short Range Recovery helicopters. This equates to two pilots and ten aviation enlisted per funded operational allowance. The exact personnel cost is dependent upon how many airframes are located at a particular unit because there are economies of scale present with increased numbers of airframes. The following is a breakdown of the hourly flight hour cost:

Fuel	- $94
Unit Level Maintenance	- 94
Depot Level Maintenance	- 1055
	$1243

At our Aircraft Repair and Supply Center, where the major aircraft maintenance is accomplished and most parts and consumables are purchased, approximately 14% of all funds are expended towards labor and 86% towards parts and consumables.

SENATOR LAUTENBERG: How is the Law Enforcement Aircrew Follow-on (p.42) request related to the $2.759 million request for HH-65A Aircraft Maintenance and Operations Follow-on page 38? Please explain. Are aircraft not being flown because of a lack of aviation mechanics? How many mechanics are in the base of 1032 FTE? What is the optimal number of mechanics? How do these numbers relate to the request on p. 38?

ANSWER: The Law Enforcement Aircrew Follow-on requeston page 42 is not related to the $2,474 million (vice $2.759) HH-65A Aircraft Maintenance and Operations Follow-on request on page 38. The Law Enforcement Aircrew Follow-on identifies the shortage of HH-65A aviation enlisted billets under present staffing standards and how many additional positions would be required to fill the workload required for existing Law Enforcement deployment needs. Aircraft are not deploying at planned levels aboard our cutters for Law Enforcement patrols due to the shortage of HH-65A aviation enlisted personnel. In the base of 1032 FTE, 710 are HH-65A enlisted maintenance personnel/aircrew; the remainder are pilots. The optimum number of HH-65A enlisted personnel is 847.

SENATOR LAUTENBERG: Phase II of the TALON system for HH-65A deployment on cutters will cost $9.8 million. The justification suggests that the TALON systems are required on 210' and 270' WMECs with or without CIWS. It is not clear whether the TALON systems are required for CIWS equipped cutters? Are TALON systems needed on 378' WHECs without CIWS?

ANSWER: TALON will be required on all 210's, 270's, and 378's, regardless of CIWS, to eliminate the hazardous requirement for crewmen to handle tie-down hooks while the HH-65A rotor is turning. Pursuant to an operational evaluation of CIWS, Aviation Training Center Mobile has recommended that helicopter operations not be conducted in CIWS equipped 378's that do not have TALON, without redesign of the manual tiedowns and reduction of the operational envelope. CIWS will be installed only on 378' cutters.

SENATOR LAUTENBERG: Why aren't there any personnel savings associated with the elimination of the requirement for 4 flight deck crewmen during air operations as a result of the installation of a TALON system on a cutter?

ANSWER: Tiedown crew assignment is a collateral duty and represents only a very small portion of the total workload for the four personnel assigned. Nevertheless, tiedown crew personnel will still be required to maintain current qualifications for operations with non-TALON equipped aircraft and to meet requirements of a TALON system failure or other emergency. TALON is a proven device that significantly enhances the level of safety during ship/helicopter operations be reducing exposure of our cutter and aviation crews to the hazards of handling aircraft aboard ships.

NIGHT VISION GOGGLES

SENATOR LAUTENBERG: Why wasn't the Night Vision Goggles request submitted as an AC&I item?

ANSWER: The unit cost for both the aircraft lighting modifications and the aircrew Night Vision Goggle (NVG) equipment does not exceed the threshold criterion for submission as an Acquisition, Construction and Improvements (AC&I) item.

SENATOR LAUTENBERG: For the Night Vision Goggle project, what was procured in Phase I? What are the goals of Phase II?

ANSWER: Phase I funding was used to procure sixty four of the planned 192 Night Vision Goggle (NVG) units, 1,100 NVG compatible helmets, and cockpit lighting diagnosis/development for one HH-65A. Phase II funding will procure another sixty four NVG units, 253 NVG compatible helmets, cockpit lighting modifications for forty eight HH-65As, and provide recurring maintenance funds for the equipment.

SENATOR LAUTENBERG: What number and percentage of aircrew will be equipped with night vision goggles. Where are the aircraft and for what missions will these devices support?

ANSWER: All helicopter air stations will have Night Vision Goggles (NVGs) to support one Search and Rescue (SAR) aircrew. If an Air Station regularly deploys aircraft away from the Air Station for extended periods, NVGs will be assigned to that unit for one additional aircrew. The total requirements and locations of aircraft are listed in Table A. NVGs will not be issued to individual aircrew members, but all helicopter aircrews will be provided NVG compatible helmets, and all helicopters will have night vision compatible cockpits. Night Vision Goggles will be used in support of night Search and Rescue, Law Enforcement, and Defense Operations.

TABLE A

NVG DISTRIBUTIONS

		----- NUMBER OF NVGs -------		
AIR STATION	HELO TYPE	SAR/DEPLOY	SPECIAL MISSION	TOTAL
AR&SC		0/0	1	1
Astoria	HH-65A	3/3	0	6
ATTC	TRNG	0/0	7	7
Barbers Point	HH-65A	3/3	0	6
Borinquen	HH-65A	3/3	0	6
Brooklyn	HH-65A	3/3	0	6
Cape Cod	HH-3F	4/0	0	4
Cape May	HH-65A	3/0	0	3
Chicago	HH-65A	3/0	0	3
Clearwater	HH-3F	4/0	16*	20
Corpus Christi	HH-65A	3/3	0	6
Detroit	HH-65A	3/0	0	3
Elizabeth City	HH-3F	4/0	0	4
Houston	HH-65A	3/3	0	6
Humboldt Bay	HH-65A	3/3	0	6
Kodiak	HH-3F/65A	4/3	4	11**
Los Angeles	HH-65A	3/3	0	6
Miami	HH-65A	3/6	10***	19
Mobile		0/0	13	15****
New Orleans	HH-65A	3/3	0	6
North Bend	HH-65A	3/3	3*****	9
Port Angeles	HH-65A	3/3	0	6
Sacramento	NONE	0/0	0	0
San Diego	HH-65A	3/3	0	6
San Francisco	HH-3F	4/0	0	4
Savannah	HH-65A	3/3	3******	9
Sitka	HH-3F	4/0	0	4
Traverse City	HH-3F	4/0	0	4
SubTotal				186
Sparing (20%)				37
TOTAL REQUIRED:				223
TOTAL ON HAND:				(31)
FY88 ANTI-DRUG ABOUSE ACT (ADAA) PROCUREMENT:				(64)
TOTAL FY91/FY92 REQUIRED:				128

Notes: 4 ANVIS-6 per HH-3F unit
3 ANVIS-6 per HH-65A unit
3 Additional ANVIS-6 for deploying units
* 16 ANVIS-6 for OPBAT training (4), three OPBAT sites (12).
** 11 ANVIS-6 for Unit SAR, Cordova Deployment, and ALPAT
*** 10 ANVIS-6 for Miami HU-25C (2), HU-25C #1 deploy (2), HU-25C #2 deploy (2), two RG-8As (4).
**** 15 ANVIS-6 for H-3 trng (4), HU-25C (4), HH-65A trng (3), HH-60J trng (4)
***** 3 ANVIS-6 for Air Facility Newport
****** 3 ANVIS-6 for Air Facility Charleston

NOTE: ANVIS-6 IS TECHNICAL NAME FOR A NIGHT VISION GOGGLE UNIT.

PERSONNEL

SENATOR LAUTENBERG: From the data provided on p. 216 it appears that since 1982 the tour length of the average military member has gone from about 3.5 years to just over 2 years in 1990. What is the policy behind moving your personnel so often? Are tour lengths different for officers and enlisted?

Answer: The figures on page 216 indicate the "number of moves" and "average number of personnel" in the Coast Guard (CG). A comparison of these two figures yields a ratio of "moves" per person, not tour length: in 1982, for every 3.5 members of the CG, 1 was moved (3.5:1). In 1987, CG Headquarters was reorganized. Included in the reorganization, was a shift in accounting responsibilities in the Office of Personnel and Training and the advent of a computerized model designed to estimate travel and transportation costs more accurately. In order to use this system most effectively, the responsibility for management of all personnel-related costs was consolidated in the newly created Compensation Branch of Personnel Services Division. Accordingly, the definition of "number of moves" was changed to include, in addition to permanent changes of station (PCS), the travel costs associated with recruit training, retirements, separations, basic and advanced petty officer training and early returns of dependents from overseas areas. After these categories are removed from the "number of moves" column, the number of PCS moves in 1989, for example, becomes 10,300, changing the year's ratio from 2.0:1 to 3.7:1.

Data for Fiscal Year 1990 are consistent with this trend and indicate general stability, or a slight decrease, in the number of PCS moves. The Coast Guard makes every effort to maximize tour lengths to provide stability for our people and keep moving costs to a minimum. However, the majority of PCS moves are of a non-discretionary nature resulting from promotion, isolated duty (1 year) tour completion, shipboard tour completion (2 or 3 years), separations, retirements, long and short term training and pre-programmed organizational changes such as ship commissionings and decommissionings.

Tour lengths are not differentiated so much on an officer/enlisted basis as on a senior/junior experience basis. More junior personnel tend to be rotated more often as required by a need for broader experience and specialized training.

AVERAGE ACTUAL TOUR LENGTH FY89		
03 and Below	---	24 mos
04 and Above	---	29 mos
Warrant Officers	---	35 mos
E3 and Below	---	15 mos
E4 and Above	---	31 mos

SENATOR LAUTENBERG: If tour lengths were to go back to 1982 levels, personnel change in station costs could be reduced $9.365 Million in FY 1991. Has this been considered? What impact would this have on your programs and personnel?

Answer: Tour lengths are longer now than they were in 1982. The apparent increase in the number of moves is misleading as explained in our response to the previous question. The number of Coast Guard permanent change of station (PCS) moves has remained relatively constant between 1982 and 1990, with a slight decrease noted in 1989. Despite rising transportation costs and legislated increases in PCS benefits (weight allowances, mileage rates, dislocation allowances, etc), average relocation costs have increased only modestly. This has been in large part possible because of a conscious Coast Guard decision to extend tour lengths whenever possible.

SENATOR LAUTENBERG: What would be the impact on tour lengths or your programs of not funding the increased household goods weight allowances?

ANSWER: In the mid-80s the Coast Guard made a conscious decision to extend tour lengths consistent with other operational and personnel constraints. We are doing all we can to hold down costs. Most moves (75%) are driven by overseas assignments, accessions, training, retirements and separations...non-discretionary.

The increased weight allowance is an entitlement and it would be necessary to reprogram funds internally to cover the higher costs of transferring members if the additional $2.8 million requested is not provided. In effect, this would reduce our budget by the amount necessary to pay the salaries of approximately 80 people.

SENATOR LAUTENBERG: What is the enlisted loss rate as a function of specialty (i.e. rate)? How do these compare with other services? What programs do you have to retain personnel in critical specialties? What measures of success do you have for these retention programs?

ANSWER: Loss rate is computed by dividing the total enlisted losses for a given year by the end of year strength for that year. This computation controls for changes in force structure and length of service profile, and is similar to the way in which other government agencies report turnover. The following table shows enlisted loss rate by percentages by rating for 1989 and for the period 1985 - 1989.

Rating	1989	Historic 1985 to 1989	Rating	1989	Historic 1985 to 1989
AD	7.08	7.76	HS	11.37	9.68
AE	5.10	7.46	MK	11.04	12.14
AM	6.92	8.09	MST	11.43	10.04
ASM	3.53	5.18	PA	17.07	12.15
AT	10.19	9.41	QM	11.98	11.15
BM	9.74	9.31	RD	13.94	12.35
DC	8.47	12.14	RM	14.05	13.31
EM	12.77	14.42	SK	8.90	10.35
ET	10.70	15.96	SS	15.62	17.05
FT	7.14	8.60	ST	15.33	16.99
GM	7.86	11.73	TT	9.05	13.27
			YN	9.43	9.90

TOTALS	10.49	11.52

We have no information with which to compare these rates to those of the other military Services. Further, Coast Guard ratings, even those with similar or identical titles, are not the same as the ratings, or specialties, of other military Services.

The Selective Reenlistment Bonus (SRB) program is used as a short-term incentive to encourage the retention of individuals who are serving in ratings designated as critical by the Commandant. The SRB program allows Commandant (G-PE) to offer a reenlistment incentive to eligible ratings at certain specific points during a member's career. For the purpose of defining eligibility periods within the first 14 years of active service, three zones of consideration are established. Zone A is defined as the period from 21 months through 6 years of active service. Zone B is defined as the period from 6 through 10 years of active service. Zone C, which is defined as the period from 10 through 14 years of active service, is not used by the Coast Guard.

SRB's are a major factor affecting retention rates. Retention is a variable affected by many influences including, but not limited to, pay and entitlements, the economy, job satisfaction, the advancement potential of a rating, sea/shore ratios, marketability of a specialty in the civilian workforce, billet deletions, etc. Coast Guard shortages occur most frequently in the technical ratings; those skills are in high demand in the civilian workforce.

Because the reenlistment decision is affected by so many factors, there is no single measure of success for our SRB program. We estimate that our program's effectiveness is similar to that of the U. S. Navy. In 1983, the Center for Naval Analysis conducted a study titled "Navy Manpower/Personnel Issues in the 1980's" and found that a one-level increase in SRB raised Zone A reenlistment rates one to four percentage points, and Zone B rates three to six points. The range is due to the fact that some ratings are less responsive to bonuses than others, and therefore, a larger amount is needed to stimulate reenlistments. This is particularly true of ratings with the most arduous working conditions and extensive sea duty. The study's section on SRB stated that the Navy's bonus program saved 2.5 recruiting and training dollars for every SRB dollar spent. It concluded by stating, SRB is a demonstrably cost-effective way to reduce shortfalls and expand the Navy to desired or needed levels.

SENATOR LAUTENBERG: What is the enlisted loss rate as a function of grade or time in service? How do these compare with other services?

ANSWER: The following table provides the Coast Guard enlisted loss rate by pay grade for fiscal years 1983 through 1989; these ratess include retirements. We do not have the data on the enlisted loss rates of the other military Services.

Loss rate by pay grade

	1983	1984	1985	1986	1987	1988	1989
E-2	9.2%	15.2%	16.6%	19.6%	13.2%	21.0%	15.6%
E-3	12.0%	16.1%	16.2%	19.1%	15.6%	14.9%	14.4%
E-4	16.2%	19.3%	15.5%	18.5%	16.9%	13.9%	15.1%
E-5	11.9%	13.4%	11.6%	15.2%	11.1%	11.1%	9.8%
E-6	3.4%	4.8%	4.6%	5.6%	5.6%	5.3%	5.3%
E-7	5.2%	4.6%	4.1%	5.1%	5.1%	6.5%	6.6%
E-8	9.0%	10.2%	13.6%	13.6%	9.8%	13.4%	10.5%
E-9	20.3%	19.2%	21.1%	21.6%	15.3%	18.6%	15.6%

SENATOR LAUTENBERG: What is the officer loss rate as a function of specialization or education or other professional qualification? How do these compare with other services? What programs do you have to maintain critical specialties?

ANSWER: Commissioned Officer Separations by Specialty

Specialty	Loss Rate (% within specialty)
General Administration	9.0%
Personnel	6.5%
Management	5.0%
Comptrollership	4.0%
Marine Safety	6.5%
Engineering	5.1%
Aviation	5.2%
Operations	5.1%

The officer loss rate, for all types of separations, as a function of specialization is presented above. We have no data available for comparison with other services. Direct Commissioning programs are a primary source of officers to fill critical specialties (i.e. lawyers, aviators, engineers). In addition, prior trained military officers and graduates from selected ROTC and structured cadet programs who possess needed degrees or experience have been specifically encouraged to apply for a Coast Guard commission. The Coast Guard has a very active professional and postgraduate training program.

SENATOR LAUTENBERG: What is the officer loss rate as a function of rank or time in service?

ANSWER: Officer Separations as a Function of Rank

Rank	Retirement	Resignation	Discharge	Release from* Active Duty	Overall Loss Rate
		[% annual losses by grade]			
02	0	1.4	4.6	1.9	7.4%
03	1.6	2.2	0.7	0.7	4.5%
04	3.0	0.2	0	0	3.2%
05	7.4	0	0	0	7.4%
06	15.4	0	0	0	15.4%
07-010	17.2	0	0	0	17.2%

Officer loss rates remain at manageable levels, indicating that overall retention is very favorable.

*Release from Active Duty includes Reserve Officers who separate from the Service, either voluntarily or involuntarily, upon expiration of their active duty contract.

SENATOR LAUTENBERG: What is the retirement rate for officers as a function of specialty? If there are different rates among specialties, explain.

ANSWER:

Specialty	Retirement Rate (% within specailty)
General Administration	5.8%
Personnel	3.7%
Management	2.7%
Comptrollership	2.3%
Marine Safety	2.8%
Engineering	2.8%
Aviation	3.1%
Operations	2.2%

Variations in retirement rates are generally minor. The overall rate and slight variation between specialties is not a matter of management concern; no action appears necessary.

SENATOR LAUTENBERG: What is the rate of pass-over for officers at each promotion point as a function of specialty? Academy vs. non-academy?

ANSWER: When reviewing promotion board results, the Coast Guard refers to "selection rate," rather than "pass-over rate." The following table represents the selection rate for the specialties of General Administration, Personnel, Management, Comptrollership, Marine Safety, Engineering, Aviation and Operations at the various promotion points. Also depicted are the selection rates for officers commissioned through the Academy and those from other sources. These data represent a compilation of results of selection boards conducted from 1980 to 1989. This provides a better overall picture than a one year comparison, since the number of officers considered for promotion within any one specialty can vary significantly from year to year.

SPECIALTY	SELECTION RATE Captain	Commander	Lieutenant Commander	Lieutenant
General Administration:	74.4%	77.6%	73.3%	79.2%
Personnel:	82.9%	78.6%	75.6%	80.2%
Management:	75.9%	71.2%	79.7%	71.8%
Comptrollership:	73.9%	83.1%	74.6%	84.6%
Merchant Marine Safety:	65.0%	79.0%	74.0%	81.0%
Engineering:	62.0%	77.0%	78.0%	87.0%
Aviation:	71.0%	74.0%	79.0%	88.0%
Operations	67.0%	75.0%	78.0%	85.0%
Academy Graduates:	73.0%	83.0%	78.0%	83.0%
Non-Academy:	61.0%	71.0%	74.0%	86.0%
AVERAGE:	69.0%	77.0%	77.0%	84.0%

SENATOR LAUTENBERG: What programs or policies are there to address higher rates attrition, retirement or pass-over among specialties? How successful have you been at retaining personnel in critical specialties?

ANSWER: With the exception of fixed wing aviators, we do not have a problematic loss rate that requires special management attention. Our fixed wing aviator problem is no worse than the other services and is gradually improving with careful management of training and assignments. In all specialty areas we do maintain the flexibility to fill billets through expansion of our direct commission programs wherever service need is unfulfilled. We have the same flexibility with our advanced training and education programs.

SENATOR LAUTENBERG: Are the loss rate, retirement rate, or pass-over rate higher among women for officers? For enlisted? For minorities?

ANSWER: The loss rate for female enlisted members is higher than for males, particularly during the early years of service. The following table illustrates the difference:

COMPARATIVE ENLISTED LOSS RATES
U. S. COAST GUARD

	Male	Female
1985-1989 Loss Rate	14.1%	23.2%

(number of losses for an entire year divided by on-board enlisted strength)

Historically, enlisted women leave the Service at a higher rate than do enlisted men. During the period 1985 through 1989, 46.1 percent of women's losses were from the lowest two pay grades (E-1 and E-2), compared with 29.3 percent for men. The majority of these losses are due to pregnancy. At pay grade E-3, the loss rates for men and women are nearly equal. Moreover, first and subsequent term reenlistment rates are approximately equal. These data would indicate that after the first two years of higher loss rate, women's attrition rate is about that of men's.

To date, no Coast Guard woman officer has served sufficient time to become eligible for a 20 year voluntary retirement. Similarly, there are no minority commissioned officers scheduled for retirement in FY 90. Retirement rates based on historical data cannot be determined. The loss rates for other types of separations are shown below.

	Retirement	Resignation	Discharge	Release from Active Duty	Overall Loss Rate within each group
	[% annual losses by separation type]				
Females:	0	4.0	0.8	2.4	7.2%
Minorities:	0	0.4	3.0	1.5	4.9%
Others:	3.0	1.0	0.7	0.7	5.4%

Because of the nature of the enlisted advancement system, there are no data available to determine "pass-over" rates for enlisted personnel.

When reviewing officer promotion board results, the Coast Guard refers to "selection rate," rather than "pass-over rate." Comparing the selection rate of female and minority officers to white, male officers on a purely statistical basis can be extremely misleading. The small number of minority and women officers in the Coast Guard make comparisons difficult. The Coast Guard first began commissioning women through Officer Candidate School in 1973. The women from this first year group have become eligible for consideration for selection to the grade of commander in the last few years. No women have become eligible for consideration for selection to the grade of captain. The Coast Guard Academy class of 1980 was the first to include women. None have yet been considered, in zone, for selection to lieutenant commander. The following table provides the selection rates for minority and women officers, compared with the overall average selection to various grades between the years 1980 and 1989.

SELECTION RATE

	Captain	Commander	Lieutenant Commander	Lieutenant
Minority Officers	100.0%[1]	70.4%	64.4%	73.5%
Female Officers	N/A[2]	50.0%[3]	75.8%	77.2%
Overall Average	69.1%	76.7%	76.6%	84.4%

Notes: [1] 3 minority officers considered 1980 - 1989.
[2] No female officers considered 1980 - 1989.
[3] 6 female officers considered 1980 - 1989.

SENATOR LAUTENBERG: What programs or policies are there for families with dependents with Special Needs?

ANSWER: The CG Special Needs Program was developed and implemented in 1984 to assist Coast Guard personnel who have dependents with medical, physical, psychological, and/or educational disabilities. This program also provides careful screening of these families to ensure adequate services and programs are available in proposed areas of relocation, particularly in the case of overseas assignments, to prevent undue hardships. Over the past four years, the number of special needs cases has increased from a total of 120 in FY86 to 167 in the first 8 months of FY90. There are sixteen full-time Family Program Administrators located at district offices, Maintenance and Logistics Command's and major headquarters units who provide information, advocacy, counseling, and referrals to local agencies and services for families with Special Needs.

SENATOR LAUTENBERG: Describe present workforce shortfalls, (i.e. recruiting, retention, hiring, firing, body-billet/position matching, training, qualification programs, housing, etc.).

ANSWER: The overall workforce structure of the Coast Guard is generally in good shape. In officer personnel, there is a body shortfall when compared with the current billet numbers, primarily at the 0-3 and 0-4 levels. The current overall staffing level for enlisted personnel has an overage in nonrates and a shortfall of petty officers in a few critical ratings (RD, ST, FT, GM, ET, QM, and EM). These shortages primarily occur with mid-level petty officer billets.

Our civilian workforce is in good shape overall. We do continue to experience difficulties in attracting high quality applicants to high cost areas (New York, San Francisco, Boston), and to convince our current workforce to accept assignments to the Washington area because of high costs of living.

Recruiting Shortfalls: There is no shortage of qualified majority male applicants for entry in the Coast Guard. But there is a shortfall in obtaining qualified women and racial minority applicants.

There are no significant training shortfalls currently in the workforce; however, our operating equipment and support systems are becoming increasingly complex with associated increases in training costs. Any new initiatives requiring additional personnel must include an attendant training resource addition.

There is a shortfall in pay and compensation levels for both military and civilian members of the Coast Guard, compared to their counterparts in the civilian economy. The pay for Coast Guard military personnel is over 10% lower, and civilian personnel can be as much as 28% lower. Housing shortfalls and the actions being taken are addressed in responses to other questions.

SENATOR LAUTENBERG: Describe programs or policies to address each workforce shortfall.

ANSWER: The Coast Guard is addressing the billet/body shortfall in officer personnel by increasing the size of the officer corps in the ranks of 0-1 to 0-4. Included in this effort are the following actions:

a) Increasing the size of Officer Candidate School,
b) Increasing the number of retired and reserve recalls,
c) Obtaining Officers from DoD via direct commissioning,
d) Increasing the levels of Lieutenant continuation, and
e) Obtaining officers via direct commissioning in selected specialities.

To fill critical enlisted rates, the use of the Selective Reenlistment Bonus program and expansion of the training pipeline is underway.

Within the civilian workforce, a primary concern is and remains compensation. Civilian compensation issues can best be addressed through pay reform initiatives currently before Congress. To enhance recruiting and retention, initiatives are underway to enhance civilian career opportunities by:

a) Enhancing civilian career opportunities by increased use of upward mobility and on-the-job training experience for lower graded personnel;
b) Using compressed work schedules for certain segments of the work force, i.e. flextime;
c) Assessing reorganizational impacts on our current civilian workforce and the labor market availability within areas considered for relocation;
d) Aggressive recruiting, training, and orientation programs;
e) Performing an independent audit of all positions Coast Guard-wide to ensure that civilian personnel are properly classified and graded;
f) Utilizing special salary rates as appropriate (within the limitations and guidelines set forth by the Office of Personnel Management;
g) Employing incentive awards and performance related programs to reward employees for exceptional performance;
h) Enhancing "institutional identity" of the civilian employee through a newly-developed orientation program for new middle managers;
i) Implementing training seminars focused on female personnel who have demonstrated potential to assume management postions;
j) Implementing special programs aimed at employing minorities, women, and the handicapped.

To increase recruiting of women and minorities, we have modified our advertising campaigns. Forty-two percent of all advertising is now placed in media with a significant minority audience. All of our advertising campaigns have been revised to feature minority members in the Coast Guard. To increase the number of qualified minority officers, we have established a minority recruiting effort at the college level This program provides payment of tuition and books while earning a salary as an enlisted member in the Coast Guard. Students, in their third year of study at a predominantly minority college or university, are eligible for the program and must agree to attend Coast Guard Officer Candidate School upon graduation. In addition, we are planning to establish a Junior ROTC program in September 1991 in Miami, Florida to assist in enlisted and Coast Guard Academy minority accessions.

SENATOR LAUTENBERG: You have requested additional funding for minority recruitment. What percentage of the enlisted ranks and officer corps are minorities? How has this changed in the last decade?

ANSWER: The current composition of the Coast Guard workforce is as follows:

	Officer		Warrant Officer		Enlisted	
Sex						
Male	4819	96%	1379	99%	27,606	92%
Female	243	4%	12	<1%	2,388	8%
Race						
Black	80	1.6%	25	1.8%	2,311	7.7%
Hispanic	78	1.5%	14	1%	1,288	4.3%
Other Minority	89	1.8%	59	4.2%	833	2.8%
Total Minority	247	4.9%	99	7%	4,432	14.8%
Caucasian	4815	95.1%	1292	93%	25,562	85.2%

Since 1983 the percentage of women in the military work force of the Coast Guard has increased. In 1983, women comprised 6% of enlisted personnel. There was only 1 woman warrant officer and 2.8% of officers were women.

Overall, racial minorities have declined slightly from the 1983 levels of 14.6% to the current overall rate of 13.1% of the total Coast Guard military work force. Minority levels in enlisted personnel declined from 16.8% in 1983 to 14.8% now. However, warrant officer minority levels increased from 5.2% in 1983 to 7%, and minority officers increased from 3.4% in 1983 to 4.9% of officers currently.

SENATOR LAUTENBERG: What do you see as limitations on minority recruiting and retention?

ANSWER: Recruiting - Successful recruiting directly hinges on an organization's ability to effectively market its opportunities. In order to develop a broader understanding of Coast Guard opportunities within the minority communities, several initiatives have been implemented. For the first time since 1981, the Coast Guard met its minority recruiting enlisted goal in April of 1990. The Coast Guard met its minority recruiting goals for August, November, and January Officer Candidate School classes (1989-90). This ongoing commitment will have a positive impact on the Coast Guard's ability to meet its minority recruiting goals. Recent initiatives include:

1. Establishment of Minority Officer Recruiting Effort (MORE) program aimed at increasing the number of qualified minorities enrolled in the Coast Guard's Officer Candidate School through tuition assistance at Historically Black Colleges and Universities.
2. Reestablishment of the Minority Recruiting Branch at Headquarters and three regional recruiting commands.
3. Targeting of 25% of the Recruiting and Job Entry Division's advertising budget specifically for minority recruiting.
4. First Coast Guard JROTC program scheduled to open in Dade County, Florida in 1991.
5. Jointly sponsored conferences with National Urban League.

Retention - A key limiting factor in the retention of minorities is the low percentage of minority officers currently in the Coast Guard. The low number of minority officers has created a perception in the minority community that there is limited officer career opportunity within the Coast Guard. The small percentage of minority officers also provides few role models for advancing minorities to look upon, negatively affecting our ability to retain them. A number of initiatives have focused on the improvement of minority officer and enlisted retention. These initiatives include:

1. Establishment of a Minority Officer Advisory Council.
2. Assignment of a Special Project Officer for minority career development.
3. Special career counseling for minority officers and officer prospects.
4. Development of a mentorship program and other networking activities focusing on minority member career development.
5. The presentation of awareness programs to various Coast Guard audiences concerning our need to more successfully retain minority members.
6. Establishment of a Coast Guard Academy Committee to investigate, develop, and implement initiatives to improve cadet retention.
7. Inclusion of special precept language and briefings for promotion boards, stressing our need to retain qualified minorities.

SENATOR LAUTENBERG: A series of questions was asked previously regarding retention and recruiting as a function of rate, rank, grade, time in service and specialty. Are recruiting and retention trends for minorities similar?

ANSWER: Recruiting levels for minorities and women are not representative of the eligible U.S. population. We are working to recruit more women and minorities. Currently, we are recruiting 14.6% of our enlisted force and 5.8% of our officer force from racial minorities. In addition, women represent 13% of our total active duty force recruitment.

Loss rates for enlisted racial minorities and women are higher than the overall Coast Guard average during the first term of obligated active duty service. Thereafter retention of minority and women enlisted is above the Coast Guard overall average.

Currently, officer retention for minorities is higher than overall officer retention. However female officer retention is lower.

HEALTH CARE FUNDING

SENATOR LAUTENBERG: A five percent increase above the $70 million OE costs of the Health Care program is sought. It is unclear whether this increase is over and above the cost of living increases sought as built in changes 2b, 2c, and 2d on pages 32 and 33 of your budget request. Please explain.

ANSWER: The $3.5 million increase requested is in addition to the built-in cost of living (COLA) increases. CHAMPUS cost increases have ranged from 9 percent to 25 percent over the last four fiscal years. The Wall Street Journal reports that the average health care cost per employee in the private sector has increased by a range of 8 percent to 18 percent over the same period. Reflecting this trend, the cost of health care chargeable to the Coast Guard Operating Expenses appropriation is projected to reach nearly $90 million in FY 1991. The recurring base of health care funding is currently $70.1 million. FY 1991 adjustments of $10.7 million, consisting of $2.9 million in standard COLA and an anticipated $7.8 million in reimbursements from DoD for rendered care, will be added to the recurring base. However, we still anticipate a shortfall between projected costs and funding allocated to health care of approximately $8.6 million for FY 1991. The $3.5 million recurring increase will narrow the differential between the COLA provided and actual extraordinary health care cost inflation.

SENATOR LAUTENBERG: $920,000 is requested to reimburse the Navy for outpatient health care and other non-medical services rendered in FY 1990 and possibly previous years. How much of this is medical? Will the $3.5 million requested increase for the Health Care program be sufficient to cover the FY 1991 "additional uncontrollable" medical expenses?

ANSWER: Approximately $686,000 of the $920,000 is for medical services. With the implementation of a new Memorandum of Agreement with the Navy in FY 1990, the two services have commenced reciprocal billings at the interagency rate for outpatient health care. Because many more Coast Guard beneficiaries are seen at Navy facilities than vice versa, the Coast Guard will have a net cost increase of approximately $700,000 in FY 1990 and a projected increase of $740,000 in FY 1991. This increase is included in the overall FY 1991 cost projection for health care of $90 million. Therefore, this line item will serve to reduce the projected gap of $8.6 million between funding allocated to health care and estimated costs. The gap will be further reduced to $5.1 million after the $3.5 million is applied against the extraordinary medical cost inflation.

SENATOR LAUTENBERG: How do the per member health care costs of the Coast Guard compare to other services? To other agencies within DOT? To the private sector?

ANSWER: The Army and Air Force informally report the variable health care cost per active duty member to be $486 and $519 respectively. Their methodology excludes health care costs associated with active duty dependents and makes no provision for the extensive fixed cost structure inherent in the Department of Defense (DoD) inpatient hospital system. Thus, because the DoD services group their costs differently and the Coast Guard health care system consists almost solely of outpatient clinics, there is little common ground for comparison. In FY 1990, the total cost to our Health Care Operating Guide for active duty members and their dependents will be approximately $2,550 per active duty member. This figure compares favorably with private sector costs. A recent study printed in the Wall Street Journal estimated the average annual health care costs, per employee in the private sector, to be $2,745 in 1989. There is little basis for comparison of Coast Guard health care costs to those of other DOT agencies because in DOT only Coast Guard members are Title 10 beneficiaries with mandated care provisions because of military readiness requirement.

SENATOR LAUTENBERG: Admiral Yost has stated that one of the greater challenges to his successor will be providing adequate health care for his personnel. What are the problems in health care? Do these requests reflect solutions to the problems?

ANSWER: Since health care is a legal entitlement for Coast Guard beneficiaries, many of the costs of health care cannot be considered discretionary. It is increasingly difficult to ensure quality care in the face of spiraling health care inflation and relatively level budgets. Due to the geographic isolation of many of our field units, the Coast Guard must rely on the use of contract civilian health care providers to a greater extent than the other Armed Services. In addition, with the imminent closing of some Department of Defense medical facilities, Coast Guard beneficiaries in those locations will be forced to seek more expensive care options from commercial providers.

We are making every effort to identify and resolve health care issues and have commissioned a study to make recommendations which will improve the effectiveness and efficiency of our health care delivery system. However, as the Coast Guard remains heavily dependent upon the private sector for care, we are also subject to the same cost and quality problems common throughout the nation. The funding requested here is needed to continue providing adequate health care for our beneficiaries while the health care industry and, indeed, the country addresses this universal problem.

SENATOR LAUTENBERG: How much health care has the Coast Guard historically received from DoD? How is this reflected in your budget request?

ANSWER: In FY 1987 the Coast Guard spent $10.4 million for DoD health care services. Projected FY 1990 DoD health care costs are expected to reach $14.4 million. These figures equate to an average annual cost increase of 11.5 percent over the four year period. DoD facilities provide a significant amount of care to Coast Guard beneficiaries. In FY 1990, approximately 17 percent of our health care dollars will be spent on reimbursments to DoD. This percentage has remained relatively constant over the period, with 16.5 percent of the costs going to DoD in FY 1987.

Statistics indicate that the eligible DoD and CG beneficiary populations (active duty, retired, their dependents and survivors) have remained relatively stable (approx 9.2M) over the last decade. Coast Guard Clinic statistics indicate 380,000 and 330,000 outpatient visits during fiscal years 1988 and 1989, respectively, inferring that we are not treating significantly more people as a contributing factor to rising health care cost. While the percentage of care provided by DOD has been constant, the cost of that care has risen proportionally with increases in the established interagency reimbursement rate. Care provided by DoD facilities, however, continues to be significantly less expensive than the private sector.

All projected costs of DoD provided care are included in the $90 million estimate for FY 1991 and were considered in our budget request.

MANDATED INITIATIVES

SENATOR LAUTENBERG: Please note any search and rescue stations, or other units of the Coast Guard that will be closed or decommissioned in fiscal year 1991 as identified in the Budget of the United States and its supporting documentation. Where are these closings documented?

ANSWER: Three older medium endurance cutters will be decommissioned in FY91. They were identified with funding and personnel costs removed in the FY90 budget. These three cutters are the offsets for the three final new 270 FT Bear class medium endurance cutters.

SENATOR LAUTENBERG: What would be the effects of continuing the fifth proviso of the FY 1990 Coast Guard Appropriation for operating expenses in the FY 1991 DOT Appropriations Act?

ANSWER: The effects of continuing such a proviso would be to constrain the Coast Guard's management flexibility in exercising timely and effective control over the organization's personnel and capital resources. The combination of this constraint with mandated spending floors in the drug law enforcement and marine environmental protection missions limits decision options when responding to budget reduction requirements, extraordinary mission requirements, and reallocation of resources to meet changing national priorities and needs. This provision is unnecessary and counterproductive to effective allocation of agency resources.

SENATOR LAUTENBERG: As there are no installation closures or A-76 actions identified in your FY 1991 budget estimate, and these costs would be considered as expenses in any cost/benefit analysis to effect those actions, how can you justify requesting $100,000 for the homeowners assistance program?

ANSWER: While it is true that no installation closures are identified in the FY 1991 President's budget, there are 190 military full time positions listed as A-76 anticipatory reductions on page 31. The $100,000 requested for the homeowners assistance program will provide for house sale losses occurring as a result of associated personnel transfers.

SENATOR LAUTENBERG: You are requesting $369 thousand for DoD's new ID card system. What are your present annual costs of the present system? Why aren't these costs identified as offsets?

ANSWER: The current ID cards are DD (DOD) forms which are ordered from GPO by individual Coast Guard units on a decentralized basis, as are all other DD forms used on an inter-service basis. Although the distribution of these cards is controlled through the services' intelligence network, it would be very time consuming and costly to separate and identify the aggregate program cost for these forms from among the other DD forms routinely ordered and used by all Coast Guard units. In addition the costs of the current ID forms are not significant. The processing of the current paper ID card is part of routine personnel administration. The specific information required on the form is currently manually processed and the card is then laminated. The requested costs are for the Coast Guard's share (2%) of this Congressionally mandated program. DoD intends to purchase automated ID card production equipment, card readers, encoder systems and software for the seven Uniformed Services.

SENATOR LAUTENBERG: If one were to include your (military) urinalysis program and your military discipline system as drug education and awareness, along with mandatory participation in the Department-wide program, determine the full costs of your drug education and awareness program. What does the $139,000 requested buy?

ANSWER: The $139,000 requested is the Coast Guard's proportional cost of the Department-wide civilian drug testing program. These requested funds are for sample collection, lab analysis and drug education for Coast Guard civilian employees.

The military drug testing program costs approximately $1.4 million for the laboratory testing contract. This does not include the costs of the military collateral duty personnel who administer the program. The military drug testing program is not a part of the Department-wide drug testing program.

The only identified costs for the military urinalysis program is the $1.4 million. All other costs are included in the OG-01 Military Pay and Entitlements costs or in unit OG-30 general operating costs. A rough estimate of the total cost of the military urinalysis and associated military discipline would approximate 3^+$ million.

It should be noted that the Coast Guard military discipline system is a far more encompassing program, only a portion of which involves the drug testing program. Most drug offenders are administratively discharged and do not pass through the military discipline system. While there are administrative boards which deal solely with drug use, others deal with performance. Generally, courts-martials have a drug related charge as only one of several charges preferred.

RESTORATION OF FUNDING

SENATOR LAUTENBERG: Item 2(b) of your Operating Expense Justification (p. 35) requests to annualize the 1990 pay raise and restore operational funding. Item 2(1) requests $41,750,000 for restoration of funds resulting from Gramm-Rudman-Hollings. Are you therefore asking for $69,292,000, or 38.3% of your increase requested for Operating Expenses, to restore monies cut from your budget last year?

ANSWER: Item 2.b. annualizes money for the Fiscal Year 1990 pay raise. It does not represent money cut from the Coast Guard budget last year. Senate Report 101-121 accompanying the 1990 Appropriations Bill identified sources of funds which could be used to cover the nine months of the pay raise needed in Fiscal Year 1990. In the Fiscal Year 1991 budget, item 2.b. requests $18.205 million to annualize two-thirds of the first nine months of the raise, and $9.337 for the final three months of the full year raise (which did not need to be paid in Fiscal Year 1990). An additional $9.25 million made available as a result of slippage in the land based aerostat program (as identified in Senate Report 101-121) will complete the funding of the Fiscal Year 1990 pay raise.

Item 2.1. asks for restoration to the Coast Guard funding base of $41.75 million. Of this amount, $28.4 million restores the Fiscal Year 1990 Reconciliation Bill cut; $5.8 million restores the Byrd Amendment reduction; and $7.5 million restores to the Operating Expenses (OE) base a transfer made in Fiscal Year 1990 from OE to Acquisition, Construction, and Improvements. The President asked for restoration of these funds to prevent a recurring reduction to Coast Guard operations. Because the Coast Guard was able to identify one-time sources of money available to cover the shortfall in Fiscal year 1990 and because the Fiscal Year 1991 budget requested restoration, the Coast Guard did not make permanent reductions in operations in Fiscal Year 1990 to offset the shortfall.

SENATOR LAUTENBERG: The justification to restore these $69 million is inadequate. A threat to the Coast Guard's operating status to support ongoing operations is cited as one result of not funding part of this request. Specifically, what operations (by program, by district) are threatened? Please justify the complete request by explaining how and where these funds will be utilized. What activities did not occur in 1990 that would occur in 1991 with restoration of these funds. Please note if these activities occurred in 1989. What would be the impact of not providing these funds for each of these activities.

ANSWER: Of the $69.292 million, $9.337 million adds funding to the Coast Guard budget base for the final three months of the Fiscal Year 1990 pay raise. These funds were not needed in Fiscal Year 1990 or previous years because the pay raise was not effective until January 1990, three months after the start of Fiscal Year 1990. $7.5 million restores to the Operating Expenses (OE) base a transfer made in Fiscal Year 1990 from OE to Acquisition, Construction, and Improvements (AC&I) to purchase aircraft spare parts. This transfer from OE to AC&I did not occur in Fiscal Year 1989.

The remaining $52.45 million were needed in Fiscal Year 1990 to pay operating expenses for the size and level of operations of the Coast Guard which existed at the end of Fiscal Year 1989. In order to balance the budget the Coast Guard had to either identify sources of funds to pay for the operations or reduce operations. In making this choice, our critical factor was the prognosis of whether the funds would be restored to the Coast Guard budget base in Fiscal Year 1991 or become a permanent reduction. Because the President included restoration of the funds in the Fiscal Year 1991 budget request, the Coast Guard decided not to cut back operations or make permanent reductions in units, but rather to attempt to bridge the funding gap in Fiscal Year 1990. Fortunately, that task was made somewhat easier because of a provision in the Dire Emergency Supplemental Bill in Fiscal Year 1989 which provided that reimbursement from Exxon for Coast Guard response to the Exxon Valdez oil spill would be deposited in the OE Appropriation instead of in the Pollution Fund. This one-time source of funds provided more than $20 million of the $52.45 million needed. Additionally, in anticipation of a potential shortfall in funding in Fiscal Year 1990, the Coast Guard had identified approximately $20 million of Fiscal Year 1989 funding that was used to purchase items that were required in Fiscal Year 1990. Fiscal Year 1990 funding needs were therefore reduced by the amount of the items pre-purchased in Fiscal Year 1989. The remaining $12 million of the shortfall was covered by postponing maintenance to Fiscal Year 1991 that had been scheduled for Fiscal Year 1990.

If the $69 million are not provided to the Coast Guard's budget base as requested, the Coast Guard will be forced to make permanent reductions in units and operations to cover the permanent shortfall in funding. The one time source of funding from Exxon is gone; there are no end of year funds in Fiscal Year 1990 expected to be available to pre-purchase items for Fiscal Year 1991; and maintenance cannot be deferred again without adverse effects on operations -- not only is there the normal Fiscal Year 1991 maintenance requirement, but there is the deferred maintenance from Fiscal Year 1990 on top of that.

SENATOR LAUTENBERG: What monies were diverted from which "traditional operational support activities ... that would have normally gone for maintenance, support and operation of facilities -- both stations and equipment?" What facilities and what equipment?

ANSWER: The shortfall resulted in deferral or reduction of maintenance on shore units, cutters, boats, and aircraft Coast Guard-wide. The list of impacted projects is extensive, but includes such things as: propulsion consoles for 270-foot medium endurance cutters; Ship Structural & Machinery Evaluation Boards

(SSMEBs) on older cutters and 41-foot utility boats; a variety of cutter ordnance projects; liferaft relocation on Polar icebreakers and 140-foot icebreaking tugs; replacement of cutter magazine alarms; various aircraft maintenance activities; barracks rehabilitation at Governors Island, NY; and dozens of minor repair/improvement projects at shore units throughout the Coast Guard.

SENATOR LAUTENBERG: The Coast Guard has almost a year now to consider the impact of long term reductions and adjust programs to reduced operating levels without adversely impacting the infrastructure of the organization (i.e. deferred maintenance, spare parts, etc.). What contingencies have you made for permanent reductions in your operating base? Describe in ten million dollar increments to $100 million.

ANSWER: Although it has been almost a year since the Reconciliation Bill and Byrd Amendment cuts, the Coast Guard has not been planning for long term reductions in operations because the President's budget priorities were such that the FY 1991 budget requested restoration to the Coast Guard budget base of the funding reduced in across-the-board cuts in FY 1990. If the Congress decides that permanent cuts are required, then operations and units will have to be reduced commensurately. Since over half the Coast Guard Operating Expenses base goes to fund personnel costs, it is reasonable to assume that approximately half of any permanent cut in funding would require reduction in the size of the Coast Guard's personnel strength. A cut of $100 million would cause a severe adverse effect on Coast Guard operations. It would require a cut of approximately 1500 personnel, and (assuming an average unit size of 30 personnel) a cut of approximately 50 Coast Guard units. Quite frankly, in view of the strong support in Congress and within the Administration for additional Coast Guard effort in Marine Environmental Protection, and conservation of fishery resources, and the continued effort to stop the importation of illegal drugs and to continue Marine Safety and Search and Rescue missions, the Coast Guard's contingency plans have been to slowly expand operations not reduce them.

OPERATING EXPENSES

SENATOR LAUTENBERG: Refer to page 19 of your Budget Estimate. Provide a detailed breakout of the following obligations for FY 89-91: Item 22--Transportation of things; Item 23.1--Rental Payments to GSA; Item 25--Other Services; Item 26--Supplies and Materials; and Item 99--Reimbursable Obligations. Include with and without DoD services-in-kind.

ANSWER: A detailed breakout of the requested obligations are provided in the following tables:

Item 22.0 -- Transportation of things	TABLE A
Item 23.1 -- Rental Payments to GSA	TABLE B
Item 25.0 -- Other Services	TABLE C
Item 26.0 -- Supplies and Materials	TABLE D
Item 99.0 -- Reimbursable Obligations	TABLE E

TABLE A

ITEM 22 -- TRANSPORTATION OF THINGS [1]
Operating Expenses
(Dollars in thousands)

DETAIL	FY 89 Actual	FY 90 Estimate	FY 91 Estimate
- Transportation of fuel, aeronautical, electronic, recreational, medical and dental equipment, ordnance, etc.	$7,087	$7,342	$7,584
- Transportation of ADP equipment	5	6	6
- Rental of Non-Passenger vehicles	4,040	4,200	4,339
- Transportation of House-Hold Goods (HHG) other than Permanent Change of Station (PCS) - Forced movements of HHG locally	187	200	207
- Transportation of HHG - transportation expense, packing/unpacking, etc.	28,207	32,616	36,870
- Transportation of Motor Vehicles	86	90	93
TOTAL COSTS	$39,612	$44,454	$49,099

NOTE: 1/ Transportation of things does not include DoD Services-in-kind monies.

TABLE B

ITEM 23.1 -- RENTAL PAYMENTS TO GSA [1]
Operating Expenses
(Dollars in thousands)

DETAIL	GSA RENT ESTIMATES
o FY 1989 Rent Obligations:	
- Office space	$15,745
- Non-office space	5,437
- Joint-use space	697
- Other space (inside/outside parking)..	1,140
TOTAL FY 1989 ACTUAL	$23,019
o FY 1990 Rent Obligations:	
- Office space	$20,831
- Non-office space	6,060
- Joint-use space	679
- Other space (inside/outside parking)..	1,176
TOTAL FY 1990 RENT ESTIMATE	$28,746
o FY 1991 Rent Obligations:	
- Office space	$22,295
- Non-office space	6,969
- Joint-use space	841
- Other space (inside/outside parking)..	1,248
TOTAL FY 1991 RENT ESTIMATE	$31,353

NOTE: 1/ GSA Rental Payments do not include DoD Services-in-kind.

TABLE C

ITEM 25 -- OTHER SERVICES
Operating Expenses
(Dollars in thousands)

DETAIL	FY 89 Actual	FY 90 Estimate	FY 91 Estimate
- Aircraft services	$92,036	$102,784	$118,836
- Computer services	13,214	14,767	17,063
- Boating services	2,244	2,506	2,897
- Electrical Engineering services	7,221	8,064	9,323
- Health services	23,638	26,387	30,521
- Services-in-kind	[57,000]	[55,800]	[55,800]
- Miscellaneous services	18,587	20,758	24,000
- Services-in-kind	[1,700]	[2,900]	[2,900]
- Ship services	43,473	48,550	56,132
- Shore services	74,257	82,930	95,880
- Training services	6,414	7,163	8,282
TOTAL COSTS (Without Services-in kind)	$281,084	$313,909	$362,934
TOTAL COSTS (With Services-in-kind)	$339,784	$372,609	$421,634

TABLE D

ITEM 26 -- SUPPLIES AND MATERIALS
Operating Expenses
(Dollars in thousands)

DETAIL	FY 89 Actual	FY 90 Estimate	FY 91 Estimate
- Aircraft supplies	$52,760	$58,763	$64,071
- Boat supplies	5,304	5,907	6,441
- Electrical Engineering supplies	15,208	16,938	18,468
- Fuel supplies	23,374	26,034	28,835
- Services-in-kind	[75,800]	[70,800]	[70,800]
- Health supplies	2,041	2,274	2,479
- Other Energy supplies	6,176	6,878	7,500
- Miscellaneous supplies	48,155	53,635	58,028
- Services-in-kind	[5,500]	[5,500]	[5,500]
- Ship supplies	29,377	32,720	35,675
- Shore services	49,920	55,600	60,621
- Training services	4,312	4,803	5,236
TOTAL COSTS (Without Services-in kind)	$236,627	$263,552	$287,354
TOTAL COSTS (With Services-in-kind)	$317,927	$339,852	$363,654

TABLE E

ITEM 99.0 -- REIMBURSABLE OBLIGATIONS
(thousands of dollars)

DETAIL	1989	1990	1991
Federal Funds	$42,643	$41,530	$41,549
Trust Funds	30,600	30,508	30,600
Non-federal sources Funds	30,288	5,318	5,718
TOTAL REIMBURSABLE OBLIGATIONS	$103,531	$77,356	$77,867

SENATOR LAUTENBERG: For the record, provide a redraft of the table on page 23 including DoD services-in-kind.

ANSWER: See the attached table.

DEPARTMENT OF TRANSPORTATION
U.S. COAST GUARD
OPERATING EXPENSES
Budget Authority (dollars in thousands)

Revision
13 June 90

	1989 Actual		*1990 Estimate*		*1991 Estimate*	
Program by activities:	*Full-time perm.pos.*	*Appro-priation*	*Full-time perm.pos.*	*Appro-priation*	*Full-time perm.pos.*	*Appro-priation*
1. Search and rescue....................	8,903	458,845	8,686	461,528	8,955	499,661
2. Aids to navigation....................	8,572	441,961	8,252	442,424	8,532	476,048
3. Marine safety.........................	2,482	128,039	2,468	135,368	2,705	150,890
4. Marine environmental protection..	2,757	137,715	3,340	175,892	3,454	192,687
5. Enforcement of laws and treaties..	14,848	714,593	15,126	757,708	14,704	820,334
6. Ice Operations.........................	1,912	98,529	1,820	95,794	1,812	101,066
7. Defense readiness.....................	2,187	112,701	2,069	111,626	2,163	120,665
8. Headquarters administration.......	[1,680]	[127,449]	[1,684]	[133,294]	[1,690]	[137,066]
Total appropriation or estimate.	41,661	2,092,383	41,761	2,180,340	42,325	2,361,351
(Military)........................	37,085		37,129		37,548	
(Civilian)........................	4,576		4,632		4,777	

Note: Includes $140,000,000 of Services-in-kind funding from DoD.

SENATOR LAUTENBERG: Provide a detailed breakout for DoD services-in-kind received by the Coast Guard in FY 1990.

ANSWER: FY 1990 DoD Services-In-Kind are targeted in the following areas:

FY90 DoD Services-In-Kind
(Dollars in Millions)

Research and Development		5.0
Stock Fund items (fuel and supplies)		70.8
Breakdown by Agency:		
Army	1.0	
Navy	22.3	
Air Force	6.0	
Defense Logistics Agency	41.5	
Procurements (ammunition)		5.5
Medical and CHAMPUS		55.8
Military Personnel funding (Chaplains)		2.9
TOTAL Services-in-Kind		140.0

The Coast Guard anticipates receiving the full level of services projected in each of the areas above by the end of FY 1990.

SHORE FACILITIES

SENATOR LAUTENBERG: Additional personnel and expenses to staff up three newly constructed facilities are requested (p. 36). Where are these facilities located? What is the increased workload at each unit? Will the number of boats assigned to these units increase? Where will these boats come from? What is the normal staffing standard for units of this size?

ANSWER: The three facilities are: Station Oak Island, NC; Station Lake Worth Inlet, FL; and Station East Tawas, MI. The Search and Rescue workload in terms of sortie hours for each of the three stations has increased an average of 78%, 65% and 37% respectively. The number of boats assigned to these three stations is not increasing. Staffing standards are based upon the response readiness posture maintained by its crew. The standard for Station Oak Island is 37, which will be attained with the 9 operational billets requested. The 13 billets requested at Station Lake Worth Inlet will bring the unit to standard staffing of 49. The 11 billets requested at Station East Tawas brings the unit to standard staffing of 26.

SENATOR LAUTENBERG: Operating and maintenance funds ($4.597 million) are requested for 32 facilities for the completion of construction projects. For the record, provide a detailed accounting of the monies for each facility, including existing operating and maintenance funds for each facility.

ANSWER: Operating expense funds are requested to operate and maintain 32 facilities that will finish construction and will start operating during fiscal year 1991. Shore facility construction follow-on funds requested are incremental increases to the existing fund base. Follow-on costs are determined based on the cost of new construction less specific conditions that will decrease operating expenses such as demolition of existing structures, energy conscious design that will decrease energy consumption, or a new location or new method of operation.

The existing OE funds base includes funds for operation & maintenance of the entire unit. Follow-on funding is targeted only to the new construction/rehabilitation, which may be only a small part of the unit. We have no method of breaking out the operating & maintenance funding base for each building within a unit.

MAJOR AC&I PROJECTS

FACILITY	ADDITIONAL OE REQUESTED	EXISTING OE BASE
	($000)	
Station Oak Island Rehabilitation	74	145
Station Oregon Inlet Relocation	23	262
Station Lake Worth Inlet Relocation	172	244
Air Station Clearwater - SEUS PH II	240	5779
Station Cortez - New Station	63	150
Station Panama City Administration Bldg	111	148
Station Toledo UPH	74	328
Base Detroit - Rehabilitation PH I & II	339	811
Support Center Seattle Pier 35 - PH II	163	1597
Mid Continent Loran Stations	1332	N/A*
Training Center Cape May Beach Replen	450	2724
Training Center Petaluma Dispensary	102	
Training Center Petaluma ET/TT School Bldg	1090	1682**
Group Long Island Sound Boat Maintenance Facility	17	393
Station New Haven Support Building	1	48
Support Center Portsmouth Boat Haulout	(6)	142
Station Marathon Shop Building	27	233
Air Station Borinquen Fuel Farm Modifications	9	4793
Station Port Isabel Waterfront	13	214
Patrol Boat Cutter Support Facility	13	N/A*
Station Depoe Bay Facilities Upgrade	39	95
Base Ketchikan Breakwater Repair	19	1427
Support Center Kodiak Cutter Storage Bldg	32	17559
Information Systems Center Computer Bldg	32	1384
Electronics Engineering Center Computer Bldg	32	2837
Training Center Cape May Child Care Facility	35	2724
Aviation Training Center Underground Fuel Tanks	34	3818**
Aviation Training Center Composite Repair Facility	9	
Training Center Petaluma Utilities Upgrade	14	1682
Yard Building 32 Upgrade	(13)	
Yard Flammable Storage Upgrade	26	3469**
Yard Acid Cleaning Building	31	

	$4597	

* New facilities, no previous funding
**Total for location

SENATOR LAUTENBERG: Why is there a backlog of shore facilities rehabilitation and maintenance? What is the magnitude of the backlog? In priority order, provide a listing of each project, work to be conducted and estimated cost.

ANSWER: Shore facilities have been deteriorating more rapidly than we can repair them due to an inadequate amount of funds allocated to this activity. We estimate the backlog to total approximately $403 million and consists of over 5600 projects at locations throughout the Coast Guard, with an average project cost of $64 thousand. A master priority list does not exist. Field commands work with the servicing civil engineering organization to prioritize and select those projects within their jurisdiction which will be accomplished each year based on the funding provided.

SENATOR LAUTENBERG: Funding for unspecified minor AC&I Shore Construction Projects totaling $9 million is requested. In priority order, provide a listing of each project identified to date, work to be conducted and estimated costs of that backlog.

ANSWER: The following prioritized projects totalling $9,000,000 are planned.

Project	Budget
1. Support Center Alameda, CA, Construct Child Care Center	$740,000
2. CG Yard, Curtis Bay, MD, Medical Clinic Addition	$540,000
3. Support Center Portsmouth, VA, Construct Ship Storage Bldg	$390,000
4. Support Center New York, NY, Construct Solid Waste Transfer Facility	$590,000
5. Station Quillayute River, WA, Construct Recreation Bldg	$640,000
6. CG Information Center, Alexandria, VA, Construct Barracks Addition	$510,000
7. Station Portsmouth Harbor, NH, Construct Floating Dock	$570,000
8. CG Electronics Engineering Center, Cape May, NJ, Renovate Electronics Repair Bldg	$510,000
9. Base Ketchikan, AK, Expand Marine Railway Enclosure	$680,000
10. Group Portland, OR, Upgrade Operations Center	$285,000
11. Support Center New York, NY, Construct Material Staging	$330,000
12. Station Mare Island, CA, Construct Breakwater	$450,000
13. Station Alexandria, VA, Construct Systems Management Bldg	$590,000
14. Support Center New York, NY, Construct Motor Pool Storage	$680,000
15. Support Center Alameda, CA, Renovate Consolidated Exchange	$690,000
16. Support Center New York, NY, Gallery Front Renovation	$380,000
17. CG Yard, Curtis Bay, MD, Construct Material Handling Bldg	$425,000

The current minor AC&I shore construction backlog is estimated by the Coast Guard to be approximately $16.1 million.

SENATOR LAUTENBERG: What is the estimated backlog of these minor shore construction projects? What is the funding history? What are your anticipated 5-year funding requirements?

ANSWER: The estimated unfunded backlog from prior years is $16.1 million. Prior year funding for the Minor AC&I program, and our anticipated five-year requirements are as follows:

1986	$5,950,000	1991	$9,000,000
1987	5,800,000	1992	17,500,000
1988	5,500,000	1993	18,000,000
1989	6,300,000	1994	18,000,000
1990	7,478,000	1995	20,000,000

SENATOR LAUTENBERG: There are several shore construction projects slated for FY 1991 funding in Alaska. Please identify each project, estimated FY 1991 and outyear costs, and funding history. Include environmental compliance projects.

ANSWER:

LOCATION/PROJECT	FY 1991 Request	FY1992 - 1995 Estimates
Northern Pacific LORAN-C Upgrade Stations	$6,000,000	$12,200,000
KODIAK, Air Station Ramp and Pavement	$2,700,000	...
KODIAK, Support Center Fire Station	$4,200,000	...
KODIAK, Support Center Nemetz Park Roads & Grounds Improvements	$3,000,000	...
KODIAK, Support Center Housing (40 units)	$9,600,000	...
KETCHIKAN, Base Storage Facility	$3,000,000	...
KETCHIKAN, Base Marine Rail Enclosure	$ 680,000*	...
KODIAK, Support Center Remediation Phase I	$2,000,000	$10,000,000

Funding for each of the above projects is being requested from Congress for the first time.

*Indicates funds requested as part of Minor AC&I program.

SENATOR LAUTENBERG: What fire fighting capabilities are available in the community surrounding Air Station Kodiak? Will the proposed fire station upgrade at Kodiak support the surrounding community?

ANSWER: The City of Kodiak, located approximately eight miles from Coast Guard Air Station Kodiak, provides its own municipal fire protection from a fire station located in downtown Kodiak and two outlying volunteer units. Coast Guard Support Center Kodiak provides complete crash, fire and rescue services to the Coast Guard owned, State of Alaska operated, airport in Kodiak. The Coast Guard's fire station also provides fire protection to all of the Coast Guard units in Kodiak and over 2,600 Coast Guard personnel and dependents living in government housing. The proposed facility will replace a forty-seven year old, undersized, functionally obsolete building. It will be constructed on a new site that will ensure the firefighting units can meet minimum DOD and FAA response standards. The State of Alaska has provided major vehicles and annual training (valued at over $5 million) for the

Coast Guard's fire station at Kodiak. The new facility will provide sufficient, safe space to garage the equipment and eliminate the need to park rescue vehicles outside. The Coast Guard's fire station functions as a secondary support to Kodiak's municipal fire department, and Kodiak's municipal fire department provides backup for Coast Guard facilities.

SENATOR LAUTENBERG: There are two AC&I requests to upgrade several facilities within the Coast Guard Yard at Curtis Bay, Maryland. Provide a funding history of recent improvements to the Yard and estimated future costs to upgrade this facility to handle the anticipated workload through the year 2000.

ANSWER: The Yard's major construction projects funded in recent appropriations include $1.8 million in 1985 for a Closed Cycle Sand Blast Facility and $1.2 million in 1987 for an Ordnance Repair Facility. In addition to the FY 1991 request for $3.7 million to upgrade the Yard's mechanical shops and $2 million to replace a portal crane, we are considering additional projects estimated at $25.4 million.

SENATOR LAUTENBERG: How large will the Support Center New York Health Care Facility be? How many patients/personnel will it serve? Does the request include new equipment?

ANSWER: The new Health Care Facility will be approximately 41,000 gross square feet. The eligible patient population in the immediate Governors Island/New York City area including active duty military, dependents and retirees is approximately 5,000. The AC&I request does not include new medical or dental equipment.

SENATOR LAUTENBERG: What are the anticipated AC&I costs to renovate/construct building space on Governor's Island through the year 2000. Are monies for the operation and maintenance for this new construction available in the base of the commanders at the Governors Island complex? Are any savings foreseen?

ANSWER: Many of the existing buildings on Governors Island are 50-60 years old. Our shore facility plans for Governors Island include projects suggested for consideration only through FY 1996. The value of those projects, including funds requested for the Health Care Facility in the FY 1991 request, is estimated at $31.2 million. Depending on the nature of approved projects (i.e. renovations or replacement of existing facilities), some funds for the operation and maintenance of the facility may be available in the Operating Expenses appropriation base. For new facility construction projects, additional funds would be required.

SENATOR LAUTENBERG: Admiral Yost has stated that one of the greater challenges to his successor will be providing adequate housing for his personnel. What fraction of the total need for the construction of public family quarters does the $13,500,000 requested represent?

ANSWER: The $13,500,000 represents approximately one fourteenth (7.4%) of the public family housing projects that the Coast Guard has identified.

SENATOR LAUTENBERG: Provide a schedule of funding, location and number of units to be constructed and cost per unit for your total public family housing construction program.

ANSWER:

LOCATION/UNITS	FY 1991 FUNDING	COST PER UNIT
KODIAK, AK (40 units)	$ 9,600,000	$240,000
CAPE COD, MA (30 units)	$ 2,200,000	$ 73,000*
ST. IGNACE, MI (12 units)	$ 1,700,000	$142,000
TOTAL	$13,500,000	

*Renovation of existing units.

SENATOR LAUTENBERG: What other programs does the Coast Guard have to address Admiral Yost's concerns for adequate family housing? What are the costs? Where are the shortages?

ANSWER: We maintain a leased housing program primarily for our enlisted personnel in areas where local housing costs significantly exceed their housing allowances. We currently administer approximately 3500 leases at a net cost of approximately $14 million per year (total cost of leases is $28.6 million less $14.6 million recoupment of housing allowances).

We also use DoD housing wherever possible. Access to DoD housing fell during the 1980's as DoD manpower requirements increased. Current base closure initiatives, however, may help if acceptable housing property can be acquired at a reasonable cost.

We are participating in a DoD study of housing allowance deficiencies and have proposed changes which would provide more of our members the ability to afford to live on the economy.

Housing information and referral services are being improved. An electronic bulletin board is being developed to provide up-to-date relocation information. We are contracting for a Coast Guard-wide survey to identify housing needs and related data. A new housing data management system is being installed to enhance management and oversight of all owned and leased housing. Total costs for these programs is approximately $200,000.

Major housing shortages exist in Cape Cod, MA; Honolulu, HI; Key West, FL; Kodiak, AK; Governors Island, NY; and San Juan, PR. Somewhat smaller shortages are being experienced in Cape May and Sandy Hook, NJ; the Florida Keys, and other coastal tourist locations.

SENATOR LAUTENBERG: An additional $1.4 million is requested to rebuild Station Tawas, Michigan. Why have the costs risen 50%?

ANSWER: The primary reasons for the cost increase are the result of unforeseen requirements for replacing and expanding utilities, including fire water pumps and water treatment equipment and the need to construct a building to house this equipment and the emergency generator.

SENATOR LAUTENBERG: No impacts on operations or maintenance funding are identified in the AC&I request for additional funding Station East Tawas, Michigan. Yet additional personnel, operations and maintenance funding is requested on p.36 for Station East Tawas. Please explain. What is the typical staffing for a facility with the workload of East Tawas, Michigan?

ANSWER: The need for increased staffing was already shown on the FY90 AC&I sheet for Phase I of Station East Tawas. Phase II will not require additional funding. Station East Tawas will keep one motor life boat and its crew available for immediate response 24 hours daily. The standard staffing for a unit operating with this readiness posture varies from 25 to 29, depending on support needs such as housing, electronics, engineering and messing.

SENATOR LAUTENBERG: As part of the final phase of the Group Eastern Shore Renovation, physical security and electronic security enhancements for MDZ requirements will be enhanced. What is the incremental cost for this enhancement?

ANSWER: The complete physical and electronic security enhancements needed to meet MDZ requirements will not be known until an operational test Base Electronic Systems Engineering Plan (BESEP) is performed by the Navy. While security features are incorporated in the facility design, the test cannot be performed until after the project is completed and the command center is operational. The MDZ concept is to develop a multipurpose communications/command control center for the Coast Guard's day-to-day operations, that can be called upon to provide Command, Control, Communications and Intelligence (C3I) functions when the MDZ is activated. The MDZ enhancements are nominal when compared to the cost of the required facility replacement or renovation. In the case the Group Eastern Shore project this cost is approximately $250,000.

SENATOR LAUTENBERG: What other shore projects include enhancements for MDZ? What are the costs?

ANSWER: Four other shore projects include enhancements that are predominantly MDZ. Locations and cost estimates for these projects are as follows: Base Mayport, FL, $460,000; Base Charleston, SC, $230,000; Base Mobile, AL, $200,000; and Group Portland, OR, $285,000.

WATERWAYS AIDS TO NAVIGATION PROJECTS

SENATOR LAUTENBERG: Identify the six Aids to Navigation projects scheduled for completion in 1990 for which the $442,000 follow-on OE funding is required. How many and what type of aids were added or upgraded on each project?

ANSWER: The following information is provided:

Project Name	#buoys	#lights	# ranges	Remarks
Sacramento River	0	8		
Bligh Reef		1		Ice Resist
Hawk Inlet	3		1	
Chesapeake Bay	78			
Mississippi River			3	
19 smaller projects	25		2	

SENATOR LAUTENBERG: Were these follow-on costs identified in the original AC&I request. If so, how have they changed? If not, why not?

ANSWER: We have typically not listed follow-on OE costs on the AC&I budget sheets for waterways projects in past budgets.

SENATOR LAUTENBERG: For each aids to navigation project identified in your AC&I request quantify the costs and types of aids to be installed and upgraded?

ANSWER: The following information is provided for those projects to be completed using the $7.0 million requested for FY91:

Project	Cost	Action
New York Harbor, NY	$1,600,000	Add 5 lights
Sandy Hook, NJ	$1,500,000	Add 2 ranges
Saginaw Bay, MI	$1,300,000	Add buoys
Freeport, TX	$445,000	Add 5 buoys
Corpus Christi, TX	$405,000	Add 7 buoys
Radar Beacons	$400,000	Add beacons
New Jersey ICW	$200,000	Add buoys
Lummi Bay, WA	$130,000	Add 3 lights 3 daybeacons
Port Manatee, FL	$126,500	Add 1 range, 14 lights
Chesapeake Bay	$115,000	Add 10 buoys
Mullet Key, FL	$100,000	Add lights
Tongue Pt, OR	$96,000	Add 1 buoy
Delaware River, DE	$77,000	Add 7 buoys
MR-GO, LA	$75,000	Add 4 lights
Bayou La Batre, AL	$53,000	Add 1 buoy
Cuttyhunk, MA	$45,000	Install fog signal/dete.
Various Projects*	$332,500	

Total	$7,000,000	

*Under $50,000 in the following locations:

Hudson River, NY
Pensacola, FL
Cat Island, MS
Texas City, TX
Burns Waterway, IN
Port Austin, MI
St. Simons, FL
Kaulana Bay, HI
Kaneohe Bay, HI
Barnegat Inlet, NJ
Point Aux Fer, LA
Mississippi River
Tampa Bay, FL
Miami, FL
Amelia River, FL
Salem River, DE
Oregon Inlet, NC
Cape Fear, NC
Iliuk Bay, AK

SENATOR LAUTENBERG: No follow-on costs are identified for the waterways aids to navigation projects in your AC&I request. Are we then to assume that future OE costs will be taken out of hide for these projects.

ANSWER: No, future OE costs will be requested in our FY92 OE budget request. Anticipated maintenance costs are included in the estimate of our future costs (4 year) for this project. Follow-on costs for the FY91 request are $307,000.

SENATOR LAUTENBERG: Provide examples of navigation restrictions the Coast Guard has placed on "some types of vessels due to inadequate aids to navigation systems." What has been the industries' view of these restrictions.

ANSWER: Fortunately, funding for major waterways projects has been timely and sufficient to preclude waterway restrictions. However, the potential for limiting vessel traffic should not be underestimated. Good examples are the large ranges we are constructing in the Chesapeake Bay and Sandy Hook, New Jersey regions. Pilots have indicated these are essential to safely transit these deep draft channels. Without adequate buoys and ranges installed the Coast Guard would consider such limitations as one way traffic, day light transits only, or required tug assistance.

SENATOR LAUTENBERG: Phase I of the project to upgrade the Northern Pacific Loran-C will upgrade the Loran station to dual rated operations. What does this mean?

ANSWER: Loran-C chains are identified in the user's receiver by each chain's unique pulse repetition rate (PRR). A chain consists of three or more Loran Stations (LORSTAs). Each PRR can be used in a different Loran-C chain. "Dual rate" refers to the ability of one LORSTA to transmit two PRRs. This reduces the number of new LORSTAs that need to be built when new chains are added.

Dual-rating a Coast Guard Loran-C station requires the installation of three racks of electronics equipment. The majority of the equipment is used to generate and control the new (additional) PRR.

SENATOR LAUTENBERG: The U.S./U.S.S.R. 1989 Summit Agreement obligated the U.S. to upgrade Loran operations in the North Pacific. What does this entail? What are the costs and what is in this request?

ANSWER: The upgrade includes the installation of dual-rate equipment at Loran Station (LORSTA) Attu, addition of monitor and control equipment at both LORSTAs Kodiak and Attu, AK, and establishment of communications channels between stations in Alaska and Kamchatka. This will allow our LORSTAs to operate with the U.S.S.R. Chayka stations.

The installation of dual-rate equipment at LORSTA Attu is most efficiently done in concert with the transmitter replacement at that station.

The cost of the dual-rate equipment, monitor equipment, installation, and spares is estimated at $455,000.

SENATOR LAUTENBERG: What are the costs and what are the projects in subsequent phases of the Northern Pacific Loran-C upgrade?

ANSWER: Phase I is transmitter replacement and dual-rate installation at LORSTA Attu, AK. Total engineering costs are $6,000,000.

Phase II is transmitter replacement at LORSTA St. Paul, AK. Total engineering costs are $6,000,000.

Phase III is transmitter replacement at LORSTA Port Clarence, AK. Total engineering costs are $6,200,000.

These costs are for new transmitter buildings, shipping and installation of the replacement transmitting equipment, procurement of new generators, and other facility upgrades needed to support the new equipment.

AC&I PERSONNEL AND RELATED COSTS

SENATOR LAUTENBERG: Your AC&I funding request for FY 1991 is less than in previous years. Yet you are requesting funding for additional personnel and related costs of $4.4 million and 40 FTE over last year, an 18% increase. No discernable justification for this increase is provided. What is this increase for? Provide an appropriate justification which reflects not only the absolute increase but in relation to the decline in AC&I funding.

ANSWER: The increased FTE provides an annualization of 28 FTE from FY 1990. In addition to this 28 FTE, 12 FTE for the 24 new billets/positions are requested in FY 1991. The 24 new billets/positions represent only a 4% increase in the authorized FTP. While the funding increase appears disproportionate to the

FTP/FTE increase, the funding is required to fully fund all requested FTE. The AC&I personnel account has been severely underfunded for the past few years due to the use of standard personnel costs when in reality, the AC&I work requires higher graded personnel. This funding shortage has resulted in the under utilization of authorized FTP and FTE. One lesson learned from the initial problems with the FRAM project is that AC&I projects must be properly staffed. It should also be noted that the total dollar amount of the AC&I appropriation is not necessarily an accurate indicator of the complexity of the projects, nor the number of personnel required to adequately administer these projects. To insure proper management of AC&I projects, the Coast Guard must be authorized the appropriate number of FTP/FTE as well as the appropriate funding to pay for the authorized FTP/FTE. Failure to provide these FTE and funding will have an adverse impact on AC&I project management and execution. Projects will be delayed and oversight diminished.

SENATOR LAUTENBERG: What workload and overhead staffing standards are the number of AC&I FTE and related costs based on?

ANSWER: There are no workload or "overhead" staffing standards for the widely varying and constantly changing AC&I workload. The work associated with the AC&I program ranges from designing and implementing computer systems to contracting for improvements to high endurance cutters to engineering new aids to navigation. Thus, there is no standard workload around which to build a standardized workforce. Each individual AC&I project must be analyzed for its potential workload and appropriate staffing estimates developed.

SENATOR LAUTENBERG: The 4 year funding history for the survey and design of various shore projects has averaged $3.175 million per year. No discernible justification is provided for the over $1.825 million increase (57%) above this average for FY 1991. Provide an appropriate justification which reflects not only the absolute increase but also its relationship to the decline in AC&I funding.

ANSWER: The 4 year average of $3.175 million has been inadequate to support our needs to complete preliminary design and engineering work on future year projects. Although overall AC&I levels may decline, we expect that the share that is appropriated for shore construction projects will increase because of our efforts to upgrade our aging shore plant. An increased level of survey and design funding is required to ensure sites are acquired and designs completed for award of construction contracts in the year in which construction funds are appropriated. Survey and Design funding levels must reflect the volume of future planned construction activity.

RESEARCH AND DEVELOPMENT

SENATOR LAUTENBERG: What, specifically, will the 12.5 percent increase in R&D funding over FY 1990 be used for in the following programs:

- Search and Rescue
- Aids to Navigation
- Marine Safety
- Marine Environmental Protection
- Enforcement of Laws and Treaties
- Ice Operations
- Defense Readiness?

Please provide a list including costs for all anticipated projects for the research and development account.

ANSWER: Page 150 distributes all R&D funding among operating programs and does not show support program work. The budget sheets, pages 152-171, reflect actual project funding.

Some of the requested 12.5% increase is to pursue breakthroughs. For example, we are incorporating the results of past buoy improvement studies into a developmental effort which requires the purchase of hardware. However, the primary focus of the actual increase ($2.2 million over FY 1990) is Marine Environmental Protection. The $23 million budget will allow the Coast Guard to pursue an aggressive marine environmental protection research program, without cutting back on promising projects in other missions such as aids to navigation and search and rescue. The Coast Guard recently developed a solid $4 million pollution research program to meet FY 1990 Congressional requirements. Some other mission projects had to be deferred to accommodate the $4 million program within the $20.8 million provided in FY 1990. The FY 1991 request contains sufficient funding for everything the Coast Guard needs to do in 1991, but since it was developed before the Coast Guard redefined its FY 1990 environmental protection R&D program in response to Exxon Valdez and Congressional direction, the FY 1991 request shows the additional pollution research funding in more flexible funding areas such as "Select Projects." The Coast Guard is presently adjusting the FY 1991 R&D budget to show the increased pollution research program under the Marine Environmental Protection category. The attached draft FY 1991 R&D program is being considered. Project funding distribution is still under development.

1. MARINE ENVIRONMENTAL PROTECTION	- Develop contingency planning tools. - Evaluate systems to detect and monitor spills ... develop procedures for controlling oil leakage and offloading cargo. - Evaluate/test state of the art oil spill recovery systems. - Evaluate burning as a means of disposal. - Examine dispersant application as method of controlling the spread of spills. - Study personnel hazards and protective equipment. - Study vessel traffic in the nation's ports to determine necessary level of vessel traffic management. - Develop requirements for information system data base.

2. SEARCH AND RESCUE	- Improve Search and Rescue satellite aided tracking ... reduce false alarms. - Continue to evaluate new search tools (i.e. night vision goggles) and develop sweep width tables. - Develop standards for boat crew performance/fatigue - Begin comprehensive review of SAR to identify R&D needs.
3. AIDS TO NAVIGATION	- Improve accuracy of the Global Positioning System (GPS) by developing a differential system for AtoN positioning and VTS use. - Evaluate electronic charts. - Develop improved buoy designs.
4. MARINE SAFETY	- Marine fire research for both commercial and CG vessels. - Study human factors/relation to marine casualties. - Emphasis on prevention of oil spills and shipboard fires.
5. ENFORCEMENT OF LAWS AND TREATIES	- Evaluate electronic surveillance systems, technology for pursuit, intercept, vessel search and intelligence systems.
6. NATIONAL SECURITY	- Develop the Surface Contact Underwater Tracker (SCOUT) system.
7. INFORMATION SYSTEMS PLANNING AND DEVELOPMENT	- Continue development of an integrated Operations Information System, and individual information systems for law enforcement, personnel management, health services, and marine safety.
8. PERSONNEL SUPPORT	- Test military workforce models, evaluate officer and enlisted rating structures, and validate models for personnel in the systems acquisition process.

9. ADVANCED COMMUNICATIONS	- Continue developing Coast applications of the Radiodetermination Satellite System (RDSS), including delivery of RDSS terminal prototypes (ground station).
10. MISSION CAPABILITIES ASSESSMENT	- Develop decision support systems for major AC&I.

SENATOR LAUTENBERG: The largest single component of R&D obligationss continues to be for "Other Services". In fact, this has increased as a fraction of the total since FY 1989 from 44 percent to nearly 50 percent). Does this mean that an increasing proportion of Coast Guard R&D will be contracted out rather than performed in-house?

ANSWER: Yes, the R&D Center is completing a transition from mostly in-house execution to mostly contracting out R&D services.

SENATOR LAUTENBERG: The programmatic totals for R&D programming and financing on page 145 do not jibe with the table on page 151. Please explain.

ANSWER: The totals on page 145 include "multimission" in the program areas. The table on page 151 lists "multimission" separately.

SENATOR LAUTENBERG: How much money do other government agencies and organizations contribute annually to Marine Fire and Safety Research.

ANSWER: The only government agency or organization to contribute is the Navy which provides approximately $250,000 annually to Marine Fire and Safety Research to fund Navy requirements.

SENATOR LAUTENBERG: How much money do other government agencies and organizations contribute annually in support of the Ship Structure Committee?

ANSWER: Other government agencies contribute approximately $400,000 annually in support of the Ship Structure Committee.

SENATOR LAUTENBERG: How much money for R&D will be for marine environmental protection in FY 1991? How much will be spent at the OHMSET facility in Edison, NJ.?

ANSWER: The initial Coast Guard FY91 budget submission request for marine environmental protection (MEP) research and development was $750,000. This request was prepared before the Coast Guard had developed its FY90 MEP R&D plan. The Coast Guard is in the process of adjusting the FY91 R&D budget to show the increased pollution research program. Presently, we have identified $3.5 million in MEP R&D projects for FY91. For consistency with the presentation of FY90 budget, this figure includes all prevention and response activities previously distributed throughout other budget categories. Of this amount, $150,000 is budgeted for the OHMSET Test facility in Edison, NJ.

SENATOR LAUTENBERG: Provide examples of how personnel support R&D projects have been directly used to increase human resource management effectiveness.

ANSWER: The Coast Guard has not fully implemented the results of its multi-year human resource management project. However, ongoing projects in this area should produce the following results:

- Reduced resident training with increased emphasis on OJT (On-The-Job) training. Phase out of some resident training courses, and implementation of more cost-effective training methods.
- Better forecast and control of personnel costs; integration of personnel needs into major system acquisition and logistics decisions.
- Ability to model workable force structure for small multi-mission workforce.
- Better career paths for improved sense of professionalism.
- More effective recruiting.
- Improved productivity. Improved the match between people, training and mission. Elimination of extraneous, ineffective policy guidance.

SENATOR LAUTENBERG: Please explain the relationship between the request for $1 million (p. 165) for R&D for analysis of vessel acquisition alternatives and the $600,000 for engineering support for cutter and boat design evaluation (p. 166) and the $1 million (p. 116) requested for survey and design of cutters and boats and each other.

ANSWER: The $1 million requested for Research and Development (R&D) analysis of vessel acquisition alternatives (p. 165) is for the development and testing of analytical tools to evaluate major acquisition alternatives and to ensure compliance with Office of Management and Budget Circular A-109. Examples are the Knowledge Support Systems development & application programs, Force-Mix model, and financial models. In addition, this funding will be used for development and testing of decision support tools, such as the operations planner, Emergency Location Transmitter (ELT) simulator, traffic model, and cutter scheduler, to aid in deployment and support of Coast Guard vessels and aircraft.

The $600,000 requested for boat design and evaluation (p. 166) represents costs for R&D projects associated with vessel test assessment and evaluation, vessel subsystem analysis, and vessel hydrodynamic studies. These include technical evaluation of the HERITAGE Class patrol boat prototype, evaluation of an unmanned vehicle for application to Coast Guard missions, patrol boat propulsion design and evaluation, planing hull stability studies, and the final phase of a joint Navy/Coast Guard project to analyze stability, loading, and seakeeping of vessels in waves.

The $1 million requested for survey and design of cutters and boats (p. 116) is a non-R&D naval engineering Acquisition, Construction, and Improvement fund allocated for specific engineering and design tasks and project management. These include efforts to maintain technical cognizance of the design and construction of the new seagoing buoy tenders and for preparation of the availability package for the POLAR Class icebreaker mid-life maintenance availability. It also includes survey and design costs for renovation, new construction, design development, advanced design evaluation, and maintenance projects. Vessel survey and design funding has been $900,000 for each of the past four years and the increase to $1 million reflects the expanded nature of the projects planned for fiscal year 1991.

QUESTIONS SUBMITTED BY SENATOR BYRD

COAST GUARD OPERATIONS COMPUTER CENTER

SENATOR BYRD: I am advised that changes in the specifications have resulted in delays of approximately nine months in the construction schedule for the Coast Guard Computer Center to be located in Martinsburg, West Virginia. The delays reflected changes in requirements to support the Joint Maritime Information Element (JMIE), which required more space as well as the need to accommodate the unique requirements for that particular element. The Committee has been notified by the Coast Guard that as of mid-March, it is in receipt of the best and final offers, which calls for award of a contract by July 1, 1990 and delivery and occupancy of the facility by June 1, 1991.

I am concerned about the recurring changes in specifications, which have resulted in the construction schedule delays and expect the Coast Guard to work closely with the General services Administration in complying with the remainder of the revised acquisition schedule as listed below.

U.S. Coast Guard facility
Martinsburg, West Virginia
Acquisition Schedule

Award	July 1, 1990
Delivery/Occupancy	June 1, 1991

May I have your assurance that there will be no further delays in this project and that you will work closely with GSA in adhering to the acquisition schedule and that I will be kept fully informed of the continuing progress of this project?

Please provide for the record an updated status report of this project, including milestone events leading to the completion of construction and occupancy of the Computer Center. In addition to the construction schedule, please include in your report, the plans for the actual move of the Computer Center, the resources which will be allocated to the project, including staffing and operating expenses and the consolidation of the various components which will be housed at the new Center.

ANSWER: The computer facility development project required significant interactions between Coast Guard planners and GSA's technical staff personnel. The close interaction was necessary to ensure the timely incorporation of the many unique construction constraints and security measures required. We expect this close relationship will continue and are making a concerted effort to avoid further delays. We will continue to keep your staff informed of our progress.

As of this writing, GSA has made a contract award to a local developer from the Martinsburg, West Virginia area. We expect facility construction activities to begin during early July 1990. The following is the projected milestone schedule for the completion of the computer facility:

May 1990 - Contract Award
June 1990 - Contractor Mobilization
July 1990 - Construction Begins
May 1991 - Construction Completed
June 1991 - Coast Guard Occupies Computer Facility
July 1991 - Start of Computer System Transitions

Our plans for executing the move to Martinsburg include the establishment of a core team of approximately ten Coast Guard Military and Civilian personnel at the FAA's Records Center located in Martinsburg. The core team will be in place by August 1990, and remain at the Records Center until completion of the facility construction. They will assume all project planning responsibility and function as the Coast Guard's immediate point of contact for close coordination with GSA. After the computer facility is completed, the core team will move from the Records Center to the new computer facility and make preparations for receiving the remaining Government staff, the computer hardware systems and the Electronic Data Processing Services contractor hired to perform all computer-system operations and maintenance support services. The actual move and installation of office furnishings, office support systems and computer hardware systems will be performed by separate contracts administered by the core team.

The completion of the new computer center facilitates the co-location and economical operation of several major Coast Guard mission support information systems. These information systems include the Automated Mutual-assistance Vessel Rescue system (AMVER), the Law Enforcement Information System (LEIS), the Computer Assisted Search Planning system (CASP) and the International Ice Plot (IIP) system.

The Center will also house the Marine Safety Network (MSN) and the Joint Maritime Information Element (JMIE) system. These two information systems provide law enforcement and decision support data to the Coast Guard and other law enforcement agencies.

SENATOR BYRD: Is the $900,000 provided in the FY 1990 Transportation Appropriation bill to facilitate the transfer of the Operations Computer Center from Governors Island, New York to the Martinsburg, West Virginia area sufficient to accommodate the move under the latest schedule?

ANSWER: We have requested an additional $3,800,000 in FY 1991 to complete the move to Martinsburg. The majority of this funding is to acquire a complete computer system to serve as an interim platform for transitioning computer systems to Martinsburg. The plan allows the transition of computer systems to occur without interruption to Coast Guard missions. The remaining activities to be funded in FY 1991 include actual move costs for personnel, computer equipment and office equipment.

QUESTION SUBMITTED BY SENATOR MIKULSKI

SENATOR MIKULSKI: I am quite interested in the relocation of the Coast Guard facilities formerly located at the Brooklyn Supply Center. Could you provide me with the status of the Coast Guard's plans to relocate these facilities?

ANSWER: We are now in the midst of a study that is examining options in relocating Supply Center Brooklyn. A decision on a location is anticipated by the summer of 1990.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

WAPPINGER CREEK BRIDGE

SENATOR D'AMATO: The FY90 House DOT appropriation report directed the Coast Guard to designate the Wappinger Creek Bridge in New Hamburg, New York as a fixed structure. I understand that the Coast Guard has not done so because it believes the report language was inadequate to accomplish this goal. What type of bill language would be acceptable.

ANSWER: Acceptable bill language could take two alternative forms: bridge specific and waterway specific.

The bridge specific form would read: "Notwithstanding any other provisions of law, the railroad bridge across Wappinger Creek, mile 0.0, at New Hamburg, New York, is hereby determined to provide for the reasonable needs of navigation under the Act of 3 March 1899, 33 U.S.C. 401; Section 1 of the Act of 23 March 1906, 33 U.S.C. 491, and Section 502(b) of the General Bridge Act of 1946, 33 U.S.C. 525(b), at the closed position and need not be maintained as a movable structure."

The waterway specific form would read: "Notwithstanding any other provisions of law, Wappinger Creek, at or about mile 0.0, at New Hamburg, New York, is determined not to be a navigable waterway of the United States for Bridge Administration purposes under Section 9 of the Act of 3 March 1899, 33 U.S.C. 401; Section 1 of the Act of 23 March 1906, 33 U.S.C. 491, and Section 502(b) of the General Bridge Act of 1946, 33 U.S.C. 525(b)."

SENATOR D'AMATO: Also is it your understanding that there are marine uses of the waterway that require the bridge to be moveable?

ANSWER: Yes. Several property owners above the bridge have boats but have been unable to transit under the bridge. A boat launch is maintained by the Village of Wappinger Falls and it is still the intent of all concerned to continue boating activities on Wappinger Creek. One boat club with 300-400 boats is in the process of purchasing property upstream of the bridge for the purpose of developing a marina. The Duchess County legislature issued Resolution 104 of 26 February 1987 urging the Coast Guard to restore the railroad bridge across Wappinger Creek to operable condition. Potential exists for redevelopment of commercial use of Wappinger Creek.

In 1987, approximately 250 individuals opposed the closure of the bridge. In June-July 1988, numerous letters were received from mariners complaining about lack of progress to open the bridge. On July 27, 1989, Hudson River Boat and Yacht Association, representing 39 yacht clubs on the Hudson River, requested that the bridge be maintained open to navigation.

SENATOR D'AMATO: Metro North estimates that it would cost $4.9 million to make the bridge moveable and that it is unnecessary. Do you agree?

ANSWER: No. Preliminary estimates for material and labor provided by Donald N. Nelson, Vice President - Operations, Metro North in 1987 projected a cost of $840,000, with a projected completion time of 1 year, to put the bridge in operating condition.

In addition, extensive repair and stabilization of the bridge is planned to accommodate triple deck car carriers as well as passenger carriers. Much of the work which Metro North claims as part of the balance of $4.9 million is maintenance and repair necessary due to the facility being allowed to fall into disrepair. Metro North also wants to update facilities which are not necessarily needed to operate the bridge but will modernize their system. Metro North spent a significant amount of money to illegally straight-rail the bridge, which must be undone to make it movable again.

The Coast Guard is not in favor of closing Wappinger Creek to navigation. Presently, navigation on the waterway is limited due to the inability of the bridge to open. Current expected use and projected future development depend on the bridge opening.

QUESTIONS SUBMITTED BY SENATOR KASTEN

SENATOR KASTEN: You have indicated that catastrophic failures of the engine have resulted from failures of the power turbine wheel caused by fatigue cracks from vibration. A new power turbine wheel has been designed but there have been delays in delivering the wheel to the Coast Guard. What has caused these delays? Are any of these power turbine wheels being delivered to civilian users before they are delivered to the Coast Guard?

ANSWER: Forty percent of the Coast Guard's operational HH-65 fleet have the new insertable blade power turbine (IBPT) wheel. Manufacturing lead time is the pacing factor in retrofitting the Coast Guard's LTS-101 engines with IBPT wheels. We are receiving the majority of the LTS-101 IBPT wheels; however, some are being delivered to civilian operators. We expect all installed LTS-101 engines to have IBPT wheels by September 1990.

SENATOR KASTEN: According to a recent article in The Miami Herald, The LTS-101 has been involved in 154 engine-related accidents, resulting in at least 14 deaths and scores of injuries. Aviation Week has linked the engine to 12 deaths. National Transportation Safety Board investigator, Ron Meyer, an experienced pilot, is investigating the most recent crash. Mr. Meyer was quoted as saying the LTS-101 is a "piece of junk" and further stated "I wouldn't fly in one of them." Is it truly safe for our Coast Guard pilots to be flying helicopters with these engines? If, as a result of this investigation, the NTSB recommends to the FAA that all aircraft with LTS-101 engines be grounded, will you follow suit? Should the FAA ground the civilian fleet until they install the new turbine wheels, will this put the Coast Guard replacement schedule even further behind?

ANSWER: No one is more concerned for the safety of our people than we are. That is why we have taken every precaution and made every possible check before determining that the HH65 is safe to fly. We have experienced no catastrophic aircraft loss or serious personal injuries as a result of flying with the LTS-101 engines. All of the fatalities that you mentioned were in the civilian sector. The power turbine wheel crack is the only safety Airworthiness Directive (AD) outstanding against the LTS-101 engine. To respond to that we adopted a more stringent inspection than required by the AD (eddy current and dye penetrant inspections every 30 engine hours or every 20 engine operating cycles) on the single piece turbine wheels.

These inspection intervals are not necessary on engines that have the Insertable Bladed Power Turbine (IBPT) wheel. Forty percent of the Coast Guard's installed LTS-101s already have the IBPT, and IBPTs will be on all installed engines by September 1990.

The Coast Guard would closely review any recommendation from the NTSB to ground the LTS-101 engine. A decision to ground Coast Guard aircraft would be based on the Coast Guard's evaluation of the data and the potential hazard in our operating environment, and the hazards that could be caused, balanced against the loss of service to the public if the aircraft were grounded.

The Coast Guard has been assured by Lycoming that we will receive priority on IBPT wheel deliveries. If the civilian fleet were grounded, it is possible that Lycoming would revise its delivery priority. This could favorably impact the Coast Guard's replacement schedule.

SENATOR KASTEN: The Coast Guard has indicated that there is not a safety problem, but rather, a maintenance problem. I am not sure I can accept that. With all of the crashes or "hard landings" which have occurred, doesn't that create a de facto safety problem? Haven't your pilots become skittish as a result of these engine malfunctions, thereby creating an overreaction when any problem occurs. Isn't that a safety problem?

ANSWER: Pilots, by the nature of their profession, are always concerned about safety matters. And, properly so. Clearly, the HH-65 maintenance problem has heightened that concern. But, it hasn't resulted in them becoming "skittish" or "overreactive." Rather, their reaction has been both prudent and professional. They recognize there is a maintenance problem. They check more carefully to be sure correct procedures have been followed. They are aware that a "fix" has been developed and is being implemented. This is a normal, constructive and balanced reaction to a maintenance-related problem. Only if we were somehow ignoring or hiding it would it be a safety problem.

SENATOR KASTEN: I understand that the power turbine wheel represents only one problem with this engine. There has also been problems with Gas Producer Turbine failures, compressor failures, control system failures, gear failures, bearing failures and low durability high temperature parts. In addition to Mr. Meyer's statement that the engine is "a piece of junk," you, Admiral Yost, stated to the House Transportation Appropriations Subcommittee that the engine is "a lemon." Did the Coast Guard have any indication this engine was "a lemon" at the time it was mated with the HH-65 airframe? Even in light of a Justice Department settlement which allegedly will require the LTS-101 manufacturer to fix their engine, if this engine is indeed a fundamentally flawed piece of junk, shouldn't we cut our losses and move expeditiously to a replacement engine?

ANSWER: The Coast Guard had no indication, during the competitive procurement of the HH-65 system, that the LTS-101 would require the extensive maintenance efforts we are currently experiencing. During the late 1970s, when the HH-65 was developed, the prevailing industry design for light helicopters included small, lightweight engines. The goal was to provide maximum power with minimum specific fuel consumption. The emerging light engine technology was heavily dependent on advances in metallurgy yielding improved materials that could withstand the increased operating temperatures and rotation speeds while meeting critical tolerance limits necessary to operate a small, yet powerful, engine.

We have confidence that Lycoming will be able to maintain the LTS-101 under the pending settlement's terms. There is some risk that Lycoming will fail to achieve the improved support posture necessary to meet the Coast Guard's missions. An improved, supportable LTS-101 is the most expeditious method of maintaining the Coast Guard's capability in the short range recovery mission area. However because of the uncertainty involved with the LTS-101, we are pursuing the T-800 engine proof of concept program. Additionally, we are developing a plan to conduct a proof of concept on the Turbomeca Arriel 1C2 engine.

SENATOR KASTEN: You have indicated that proofs of concept will soon be underway with both the Arriel and the T-800. I understand that the T-800 is a prototype designed for the Army Light Helicopter Program (LH). Recent press articles indicate that the LH program may be cancelled in favor of the Marine Osprey V-22, or be indefinitely postponed because of budget constraints. In the House you have stated that the other alternative is the commercially available Arriel which powers the commercial version of the Coast Guard Helicopter. Is the Coast Guard willing again to become the sole fleet user of a untried new engine which may never become a part of the DOD inventory? Can you provide me with the time schedule and the cost of proofs of concept on the T-800 and the Arriel? Can you provide me with an estimate of the timing and the cost of a re-engine with the T-800 or the Arriel?

ANSWER: The Coast Guard strongly prefers to secure DOD supported aircraft and components. The T-800 promises to be DOD supported and offers significant advances in technology, reliability, maintainability, flight safety and aircraft mission capability for the Coast Guard's HH-65A. If the LH Program is cancelled, we would have to review our requirements and program options prior to placing engine production orders. There are other potential DOD applications for the T-800 which may lead to DOD support independent of the future of the LH program.

The cost to the Coast Guard for the HH-65A/T-800 proof of concept integration is $10.5 million. The program, being conducted by the U.S. Army under their contract with LHTEC, was initiated in February 1990. Flight testing will begin in April 91 with the final report due in November 91.

The cost to the Coast Guard for the HH-65A/Arriel proof of concept integration is estimated to be $2 million. The estimated schedule for this program is 10 months after contract award.

The cost to re-engine all HH-65A's with the T-800 engine was estimated to be $105 million by the DOT Transportation Systems Center. This effort would take three years to complete, after initial engine delivery. Assuming funds are available, final completion date depends on whether Coast Guard production orders lead or lag initial Army LH production orders. Completion is estimated between 1997 and 1999.

The cost to re-engine all HH-65A's with the Arriel engine is estimated to be $65 million. This effort would also take three years to complete, after initial engine delivery. Fleet completion is estimated in 1996 under an emergency sole source procurement, or in 1999 under a fully competitive procurement.

In correcting HH65A engine problems, the Coast Guard's primary objective is to fix the current LTS 101 engine. No decision has yet been made that it is necessary to replace the LTS 101 engine.

QUESTION SUBMITTED BY SENATOR GRASSLEY

SENATOR GRASSLEY: Last November there was an oil spill on the Mississippi River near LeClaire, Iowa. Though this spill was extremely small compared to the larger spills across the globe, this spill was a very large concern to the people of this area. I would like to commend the Coast Guard employees who worked on this spill and were able to apprehend the suspect in a very short span of time. My question to you, Admiral Yost...how many of these smaller type spills occur in the United States in a given year?

ANSWER: Data covering the previous five calendar years from the Coast Guard Marine Safety Information System (MSIS) database reflects a yearly average of 3,041 petroleum product spills in the 0-200 gallon range from vessels, and 3,310 from non-vessel sources. The table below covers the period, 1985-1989.

PREVIOUS FIVE-YEAR PERIOD (1985-89) VESSEL PETROLEUM PRODUCT SPILLS (0-200 GALS.) WITHIN COAST GUARD AREAS OF REPORTING RESPONSIBILITY

FIVE YEAR PERIOD (1985-1989)

	1985	1986	1987	1988	1989	TOTAL
# (SPILLS)	2,048	2,926	2,986	3,630	3,617	15,207

PREVIOUS FIVE-YEAR PERIOD (1985-1989) NON-VESSEL PETROLEUM PRODUCT SPILLS (000-200 GALS.) WITHIN COAST GUARD AREAS OF REPORTING RESPONSIBILITY

FIVE YEAR PERIOD (1985-1989)

	1985	1986	1987	1988	1989	TOTAL
# (SPILLS)	4,394	3,040	2,729	2,676	3,710	16,549

SENATOR GRASSLEY: As a follow-up...are you confident that the Coast Guard's reaction to these types of spills is adequate? Are there areas of improvement?

ANSWER: Given the myriad of other tasks for which the Coast Guard has been given responsibility, we feel that our reaction to those types of spills is adequate. We place a high priority on pollution response, as we do with other emergency situations. Sometimes, however, our emergency response posture is achieved at the expense of other programs. This becomes especially critical during periods of extended or multiple operations.

We are continually analyzing our needs and refining our approach to the management of emergency situations. We are confident that the level of response the Coast Guard brings to bear on a given incident is the most appropriate for the situation.

PRESENTATION OF PERSONAL MEMENTO TO ADMIRAL YOST

Senator LAUTENBERG. Before I recess the subcommittee, Admiral, I would like to give you a personal memento.

You must have plenty of flags.

Admiral YOST. No, sir; I need one.

Senator LAUTENBERG. This is a flag certified by the Architect of the Capitol. This was flown over the U.S. Capitol at my request and it was flown for you, Paul, as the Commandant of the U.S. Coast Guard from May 30, 1986, to May 31, 1990, in recognition of your exemplary service through 39 years to this country, from 1951 to 1990. It was flown this week to carry some symbolic significance to the fact that this is your last appearance before this committee, but also to recognize that there has been a job well done.

We are very proud of you and we look forward to our personal contact for many years.

Admiral Yost. Thank you, sir.

[Applause.]

SUBCOMMITTEE RECESS

Senator Lautenberg. On that high note, we will recess the subcommittee until Wednesday, May 16, at 10 a.m. in room SD–192, Dirksen Building. We are then going to hear from the Federal Highway Administration and the National Transportation Safety Board.

I thank you, Admiral, thank all your colleagues from the Coast Guard. Semper paratus.

Admiral Yost. Thank you very much, Mr. Chairman.

[Whereupon, at 11:53 a.m., Thursday, May 10, the subcommittee was recessed, to reconvene at 10 a.m., Wednesday, May 16.]

DEPARTMENT OF TRANSPORTATION AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1991

WEDNESDAY, MAY 16, 1990

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:01 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Frank R. Lautenberg (chairman) presiding.

Present: Senators Lautenberg, Harkin, Mikulski, D'Amato, and Grassley.

DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

STATEMENT OF THOMAS D. LARSON, ADMINISTRATOR

ACCOMPANIED BY:

- EUGENE McCORMICK, DEPUTY ADMINISTRATOR
- E. DEAN CARLSON, EXECUTIVE DIRECTOR
- RICHARD LANDIS, ASSOCIATE ADMINISTRATOR FOR MOTOR CARRIERS

OPENING REMARKS

Senator LAUTENBERG. We will call this Subcommittee on Transportation of the Appropriations Committee to order.

I am pleased to be joined here by my colleague, the ranking member of the subcommittee, Senator D'Amato, from across the river. Now, that is not the Potomac River, as everybody knows. It is the important river.

Senator D'AMATO. Which is getting cleaner every day, Mr. Chairman.

Senator LAUTENBERG. I am out there with a brush, a rake, and all those things. We are seeing salmon and striped bass, not yet edible, but getting better all the time. I look forward to the day when you and I can go fishing there and then have a fish fry on the beach, or something.

Today we are going to be hearing from two agencies. First we will hear from Dr. Tom Larson of the Federal Highway Administration. He will be presenting his agency's fiscal year 1991 budget request.

Following his presentation and some questions, we will hear then from Mr. James Kolstad, the Chairman of the National Transportation Safety Board.

Dr. Larson has a long career in the transportation field, first as a professor at Pennsylvania State University and then as Secretary of Transportation for the Commonwealth of Pennsylvania. Recently he headed up Secretary Skinner's National Transportation Policy effort.

In his prepared statement, Administrator Larson says that the 1991 request is a bridge between the last year of authorization under the 1987 Surface Transportation Act and the reauthorization legislation, which will address highway needs in fiscal year 1992 and beyond.

What this means is that the request is much of the same. The level requested for the Federal aid program is an obligation ceiling of $12 billion, about $200 million below the 1990 level, and no funding is requested for any single-purpose demonstration road.

The 1991 request is not a bridge. Frankly, I see it as a cut. I am pleased that the Administrator is here to explain his view.

James Kolstad became Chairman of the National Transportation Safety Board on February 12 of this year, and we will call on him in just a few minutes. He heads an agency that was unique in 1990, because it actually received $1.3 million more than had been formally requested. I pushed for that funding because I felt that the game-playing at OMB tended to compromise the Board's ability to conduct necessary investigations and have the staffing that would be adequate for the number of technical disciplines that they had to fill.

So, many of my questions today will follow the same tack, and that is to make sure that OMB's review does not jeopardize the ability of the NTSB to conduct independent, thorough, professional, and impartial investigations.

The Board has no regulatory authority over the transportation industry. Its effectiveness depends on its reputation for impartial and accurate accident reports, realistic and feasible safety recommendations, and on public confidence in its commitment to improving transportation safety.

So I am going to make sure that they have the necessary resources and I look forward to their testimony.

But, of course, first we look forward to hearing from Dr. Larson.

I ask my colleagues if they would like to make any opening statements before hearing from our witness.

Senator D'Amato. Mr. Chairman, in the interest of time—and I am sorry that I have another hearing to attend as well—I am going to ask that my statement be included in the record in its entirety. I also would like to submit a statement from my colleague from Wisconsin, Senator Kasten.

And, with your permission, Mr. Chairman, I have a number of specific questions, which I am submitting for the record to have answered in writing.

PREPARED STATEMENTS

Senator **Lautenberg**. Without objection, we will put those statements in the record and I will ask the Federal Highway Administration to respond promptly to any of the written questions.

Senator **D'Amato**. Thank you.

It is good to see you, Dr. Larson.

Dr. **Larson**. Thank you.

Senator **Lautenberg**. Thank you, Senator.

[The statements follow:]

Statement of Senator D'Amato

Mr. Chairman, I join you in welcoming Federal Highway Administrator, Thomas Larson, and National Transportation Safety Board Chairman, Jim Kolstad, to our hearing.

The administration has proposed a highway obligation ceiling of $12 billion. This is $197 million less than the fiscal year 1990 level. If we include programs that are exempted from the obligation ceiling, the obligations would total $13.2 billion. In fiscal year 1990 we provided $240 million for demonstration programs, however, in fiscal year 1991, the administration proposes no funding for them.

Motor Carrier Safety programs would be funded at $40.7 million, an increase of $7.4 million (+22 percent) over current levels. It provides for an additional 92 safety investigators and 35 support staff. It also includes $1.8 million for a truck-related research and development program.

For fiscal year 1991, the National Transportation Safety Board [NTSB] is requesting $30.94 million, an increase of $3.7 million over current levels. This funding would provide 22 more positions for a total of 348 positions. The new positions would enable NTSB to improve the quality of its investigations, and technical reports. It will also provide four new positions in NTSB's aviation appeals program.

Mr. Chairman, I am interested in hearing more details of their budget requests from today's witnesses.

Thank you, Mr. Chairman.

Statement of Senator Kasten

Mr. Chairman, I look forward to our testimony from the National Transportation Safety Board and the Federal Highway Administration. Both of these agencies of government are vital to the safety and operations of transportation in the U.S.

As Administrator Larson points out this is the last year of appropriations under the current 1987 authorization act. The interstate system will be moving from a period of building to one of maintenance and increased attention to major noninterstate highways. I look forward to working with him on the legislation that will frame our highway programs into the next century.

The NTSB continues to be an important part of the system that has maintained the safety of our different modes of transportation. The professionalism of this organization is paramount and we will work to provide all of the assistance that we can.

PREPARED STATEMENT OF SENATOR GRASSLEY

Senator **Lautenberg**. Senator Grassley.

Senator **Grassley**. I will submit my opening statement for the record as well.

Senator **Lautenberg**. I thank you.

Also, if there are any questions that you would like to ask in writing.

Senator **Grassley**. Oh, I am going to stay around to ask my questions.

Senator **Lautenberg**. Oh, good. That is very kind of you.

[The statement follows:]

STATEMENT OF SENATOR GRASSLEY

Good morning. Thank you, Mr. Chairman.

I would like to welcome Dr. Larson to this committee, his first appearance before the Senate Transportation Appropriations Subcommittee. As he mentions in his opening statement, I am sure this is the first of many such experiences that he can look forward to.

I would like to commend Dr. Larson for the work he is doing at the Federal Highway Administration. Though he has been there a relatively short time, I am confident that the future will be a bright one for the Federal Highway Administration under his stewardship.

If I might, I would like to also welcome Mr. Kolstad of the National Transportation Safety Board to today's hearing. This is Mr. Kolstad's first appearance before this committee since the tragic airline accident in Sioux City last year. I wanted to take this opportunity to thank Mr. Kolstad and everyone at the National Transportation Safety Board for their work in Sioux City. The prompt reaction by the NTSB and the professional manner of their work is appreciated by all Iowans, especially those in the Siouxland.

I would also like to thank Mr. Kolstad for the work of the NTSB in the recent Amtrak derailment in Batavia, Iowa. Again, the NTSB reacted promptly and professionally. I hope that the State of Iowa is never in need of the assistance of the NTSB in the future. But I am confident that if we do need your assistance, you will be able to provide it.

Thank you.

STATEMENT OF THOMAS D. LARSON

Senator **LAUTENBERG**. Now, Dr. Larson, there are not too many times when a colleague is willing to relinquish floor time, but we appreciate it. Senator Grassley is always a modest man with a clear sense of proportion. He gets right to the heart of the matter and we thank him very much.

Dr. Larson.

Dr. **LARSON**. Good morning, Mr. Chairman, and thank you.

I am pleased to be here this morning on behalf of the Federal Highway Administration. I would have to note that in my role as Pennsylvania's secretary, I had the pleasure to work with my colleagues from New Jersey, New York, Iowa, and many other States, and really found that relationship to be very, very satisfying. We had good relationships over the 8 years that I was in Pennsylvania.

This is my first appearance before you, but I trust it will not be the last, and I look forward to working with you on meeting the Nation's highway transportation problems.

I have, as you noted, been involved with Secretary Skinner's national transportation policy study, and this policy, we believe, will be a very useful framework for addressing the needs of the various modes in the years ahead.

INTRODUCTION OF ASSOCIATES

Before I proceed with brief remarks, I would like to introduce the colleagues who are with me. Mr. McCormick, on my immediate right, is the Deputy Administrator; Mr. Carlson, on my immediate left, is the Executive Director. Mr. Carlson is a long-time professional, but comes to the agency as Executive Director following Mr. Morgan, who was here last year to testify. Then, on my farther right, we have Mr. Richard Landis, who is the Associate Administrator for Motor Carrier Services.

I am pleased to have these gentlemen with me.

Senator **LAUTENBERG**. You are all welcome.

Dr. **Larson**. The Federal Highway Administration budget proposal for 1991, developed in accord with the Surface Transportation and Uniform Relocation Assistance Act of 1987 and the Commercial Motor Vehicle Safety Act of 1986, is aimed at meeting infrastructure needs while achieving overall deficit targets. As you note, we propose this as a bridge between the last year of authorization of the 1987 act and the needs for the years immediately ahead.

As we look to a comprehensive and cohesive transportation policy, one primary objective of this budget is to lay the groundwork for the preservation, enhancement, and management of the transportation infrastructure.

Our immediate goal, however, is to meet the demands of the traveling public while maintaining fiscal restraint. I believe the budget will accomplish these goals.

BUDGET HIGHLIGHTS

Just let me touch on a few of the highlights. I will be very brief.

The interstate system is essentially complete. As of December 31, 42,436 miles were open to traffic, 306 under construction, 56 miles yet to be constructed, and we are really coming down to just the last couple of miles of that system.

Interstate 4R remains a high priority at about $2.8 or $2.9 billion per year. That is something that is consistent with our policy statement, that maintenance has to have an increasing priority.

On bridge replacement and restoration, again, we have had a strong program: $1.5 billion in 1989; about the same in 1990. On highway safety, we are very pleased to report that fatalities continue to decline, with approximately a 37-percent rate decrease on the urban portion of the interstate system between 1980 and 1987, and about a 15-percent decrease for the rural interstate over that same period. There are lots of reasons for this. But, clearly, the input from many members of this committee has played in that significant decline.

Motor carrier safety is a matter of great concern. There we continue, we believe, to make progress. As an indicator of progress, we have both enforcement cases and penalties nearly doubled in the period 1989 versus 1988.

1991 BUDGET

Turning then very quickly to the 1991 budget, the fiscal year 1991 Federal Highway Administration budget contains funding requests for our five program areas: Federal highways, highway-related safety grants, motor carrier safety, motor carrier safety grants, and university transportation centers.

The proposal includes budget authority of $14.2 billion, obligations of $13.3 billion, and outlays totaling $14 billion.

Very quickly, I would note the several categories. First is Federal highways. This trust funded program is the largest segment of our budget, with a proposed obligation limit of $12.013 billion.

For fiscal year 1990, we see a 6 percent higher value, by comparison, as proposed to the Congress last year. This limitation excludes an estimated $1.2 billion of obligations for programs which we propose for exemption. These exemptions are emergency relief, minimum allocation, Alaska highways, as well as obligations for the 1989 Federal Disaster Assistance Appropriation.

Regarding general operating expenses, obligations for this account are included within the Federal Aid Highway obligation limit, with $264.5 million requested, and this is a $31.2 million increase. Some of the significant increases here are in areas that we believe to have special significance. For example, there is an increase in the Highway, Science and Technology Program of some $18 million; $11 million for expansion of the Intelligence Vehicle/Highway Program; $3 million for an advanced highway simulator; a $2 million program for tax evasion control; and an increase for minority business enterprise supportive services of $2.3 million.

On motor carrier safety, a $40.7 million appropriation is requested. This is a $7.4 million increase over the 1990 program. This would increase motor carrier safety research and would provide for 185 new positions, as approved by the Congress in fiscal year 1990.

For motor carrier safety grants for fiscal year 1991, a $60 million limit on obligations is proposed: $46.7 million for basic grants to States; and $13 million for the ongoing Commercial Driver's License Program.

Highway-related safety grants continue with a $10 million obligation limit, and with regards to University Transportation Centers, Federal Highway is not participating and requesting a $5 million appropriation for our share of that program.

In conclusion, we have put together a responsible budget, both in terms of fiscal restraint and meeting the critical requirements of the highway infrastructure. The total highway budget for fiscal year 1991 complements the Department's National Transportation Policy, supporting such important goals as improved highway safety, minimizing user fee evasion, ensuring a healthy motor carrier industry, emphasizing environmental concerns, and rehabilitating the highway network.

PREPARED STATEMENT

Once again, thank you for this opportunity to testify on our 1991 budget request program. I will be pleased to answer any questions that are put before us.

Thank you, sir.

[The statement follows:]

Statement of Thomas D. Larson

Good morning, Mr. Chairman, members of the committee; thank you for providing me this opportunity to testify before the Committee on behalf of the Federal Highway Administration. This is my first appearance before you but I trust it will not be my last and I look forward to working with the Subcommittee to resolve the Nation's highway transportation problems. I consider it an honor and a pleasure to have been intimately involved in developing the Secretary's National Transportation Policy which was released earlier this year. This policy will serve as a framework for addressing needs in all the various modes of transportation both short and long term. I look forward to the implementation of this policy as it applies to the Nation's highway program. I am pleased to introduce the following witnesses who will be assisting in this hearing today:

OVERVIEW

The Federal Highway Administration budget proposal for fiscal year 1991, developed in accord with the Surface Transportation and Uniform Relocation Assistance

Act, 1987 [STURAA], and the Commercial Motor Vehicle Safety Act of 1986, is aimed to meet infrastructure needs while achieving overall deficit targets. We view our fiscal year 1991 request as a bridge between the last year of authorization under the 1987 Act and reauthorization legislation which will address highway needs in fiscal year 1992 and beyond.

As we look to a cohesive transportation policy, one primary objective of this budget is to lay the initial groundwork for the preservation, enhancement and management of the transportation infrastructure. This issue is fully explored under the National Transportation policy recently released and will be reflected in our Highway reauthorization legislation. However, our immediate goal is to meet the demands of the traveling public while maintaining fiscal restraint. I believe the budget before you will accomplish these goals.

PROGRAM HIGHLIGHTS

Before discussing the fiscal year 1991 budget, I would like to touch upon past program accomplishments.

Interstate System construction is essentially complete. As of December 31, 1989, 42,436 miles are open, 306 miles are under construction and 56 miles are yet to be constructed. $2.5 billion was obligated during fiscal year 1989; we anticipate a comparable program level in fiscal year 1990. During the calendar year, 432 miles were opened to traffic. Virtually the entire system will be open to traffic or have engineering underway or under construction this fiscal year.

Interstate 4R, our resurfacing, restoration, rehabilitation and reconstruction program continues to be a high priority of this administration with fiscal year 1989 obligations totaling $2.6 billion and anticipated fiscal year 1990 obligations of $2.8 billion.

The overall condition of the Interstate System pavement has improved since passage of the 1982 gas tax. For example, in 1983, 14.5 percent of Interstate System pavement was rated poor, and our most recent data indicates 11.5 percent of the Interstate System pavement was given a poor rating. However, the pavement condition on the rural portion of the Interstate System declined slightly between 1985 and 1987. Further, the performance (ability to move traffic) of the Interstate System has declined simply due to increased usage of the overall system, that is, peak hour usage in urban areas under congested conditions increased from 54 percent to 65 percent between 1983 and 1987.

Bridge Replacement and Restoration.—The States are now making efforts to implement bridge management programs designed to identify deficient bridges that may be hazardous to public safety so that replacement and rehabilitation can occur in a timely fashion. We recognize the need for a continuing aggressive bridge program to address this growing concern. We believe we have a strong program evidenced by fiscal year 1989 obligations of $1.5 billion exceeding the previous year by almost $200 million. In fiscal year 1990, we expect a $1.5 billion program.

Highway Safety.—We are pleased to report that the highway fatality rate continues to decline with a 37-percent rate decrease under the urban portion of the Interstate System from 1980 to 1987. Under the rural portion of the Interstate System there was also a decline in the fatality rate of 15 percent during the same period. Many factors are attributable to this decline including highway geometrics, highway design, increased law enforcement, et cetera.

Another area of Highway Safety accomplishments were the 1,202 projects which were implemented under the rail-highway crossings program and 629 projects under the hazard elimination program. These types of programs facilitate enhancement of safety between motorized vehicles and the nation's rail system.

Program obligations from earmarked safety construction funds totalled $319 million during fiscal year 1989 with an estimated $300 million during fiscal year 1990.

Motor Carrier Safety program and enforcement enhancements are enabling us to continue our program of ensuring the safe transport of goods and people over the Nation's highways. As an indicator of progress, I would note that both enforcement cases and penalties nearly doubled in fiscal year 1989 over fiscal year 1988. In 1989 we conducted 9,700 safety reviews and 8,900 compliance reviews while the States completed 1.3 million driver and vehicle inspections. In fiscal year 1990, we are adding 185 safety specialists and support staff to help bolster the number of carrier reviews.

KEY ELEMENTS OF THE FISCAL YEAR 1991 BUDGET

The fiscal year 1991 Federal Highway Administration budget contains funding requests in five program areas; Federal Aid Highways, Highway Related Safety

Grants, Motor Carrier Safety, Motor Carrier Safety Grants and University Transportation Centers. Our proposal includes budget authority of $14.2 billion, obligations of $13.3 billion and outlays totaling $14.0 billion.

I would now like to take this opportunity to review each of these program areas along with two limitation accounts, General Operating Expenses and the Right of Way Revolving Fund.

FEDERAL AID HIGHWAYS

This trust funded program constitutes the largest segment of our budget with a proposed obligation limitation for fiscal year 1991 of $12.013 billion. This obligation level, although slightly less than the limitation enacted for fiscal year 1990, is over 6 percent higher than the limitation we proposed to the Congress last year. This limitation excludes an estimated $1.2 billion of obligations for those programs which we propose for exemption. These exempt programs are: Emergency Relief, Minimum Allocation, Alaska Highway as well as obligations from the 1989 Federal Disaster Assistance appropriation.

Along with the aforementioned program level, we request a $13.770 billion liquidating cash appropriation for fiscal year 1991 which is necessary to assure sufficient cash to reimburse the States for this program.

GENERAL OPERATING EXPENSES

With the exception of Motor Carrier Safety activities, the General Operating Expenses account controls spending for essentially all of Federal Highway's administrative costs such as salaries, travel, equipment purchases, et cetera, research and development, and technology transfer.

Obligations for this account are included within the Federal Aid Highway obligation limitation with $264.5 million requested for fiscal year 1991, some $31.2 million over the enacted 1990 limitation.

Some of the more significant changes in our General Operating Expenses budget for fiscal year 1991 include: (1) restructuring some no-year and other technical programs into a "Highway, Science and Technology" program for which we are requesting an $18.0 million increase including almost $11 million for a significant expansion of our Intelligent Vehicle/Highway Systems and $3 million for the Advanced Highway Simulator; (2) requesting $2 million for the Tax Evasion Project which would expand our $500,000 effort initiated in fiscal year 1990; (3) increasing our Minority Business Enterprise Supportive Services program by $2.3 million to $7.9 million; and (4) adjustments-to-base and built-in changes of $8.7 million including $5.5 million for fiscal year 1990 and fiscal year 1991 pay adjustments.

MOTOR CARRIER SAFETY

Under this program, FHWA establishes and enforces minimum Federal standards for operating Commercial Motor Vehicles in interstate and foreign commerce. A $40.7 million appropriation for fiscal year 1991 is requested for this program. This funding level represents a $7.4 million increase over the amounts appropriated for fiscal year 1990.

Some of the more significant changes in our Motor Carrier Safety budget for fiscal year 1991 include: (1) increasing ADP support by $.9 million and ADP equipment by $.3 million. These ADP increases will result in an improved ability to monitor carrier performance and identify carriers for safety and compliance review; and (2) increasing motor carrier safety research by $.5 million. These increases will allow for a balanced research effort including $.5 million for driver fatigue and alertness research; and (3) a net increase of $5.6 million for adjustments-to-base and built-in changes, including $3.0 million annualization of the 185 new positions approved by Congress for fiscal year 1990.

The key to safety enforcement activities in the motor carrier industry is the ability to conduct reviews of motor carriers' compliance with Federal regulations. In addition, increased emphasis is being placed on the safe highway transport of hazardous materials. The additional inspectors and support staff authorized for fiscal year 1990, who will be in place and increasingly effective in fiscal year 1991, will greatly enhance these safety efforts.

MOTOR CARRIER SAFETY GRANTS

The Motor Carrier Safety Assistance Program [MCSAP] was established under the Surface Transportation Assistance Act of 1982. Under this program, FHWA awards grants and technical assistance to the States to conduct roadside inspections of commercial vehicles and their drivers.

For fiscal year 1991, a $60 million limitation on obligations is proposed for the two program areas authorized, Basic Grants to States ($46.7 million) and the Commercial Driver's License Program ($13 million). The remaining $300,000 limitation is for administrative support of the program for such activities as field demonstrations and program promotion.

HIGHWAY RELATED SAFETY GRANTS

The Highway Related Safety Grants program provides funds to States for programs designed to improve highway safety at the State and local level. For fiscal year 1991, FHWA is proposing a $10 million obligation limitation, which is the same as the amount authorized for this program in fiscal year 1991. To meet cash payments from new and prior obligations, a $10 million liquidating cash appropriation is requested.

UNIVERSITY TRANSPORTATION CENTERS

This program, which was authorized under the Surface Transportation and Uniform Relocation Assistance Act of 1987, calls for the establishment of academic transportation centers in each of the 10 Federal regions. These centers are to become a focal point and attractor of the region's best talent, resources, and facilities for promoting individual initiatives in and across transportation modes and disciplines. In fiscal year 1991, a $5 million appropriation is requested for funding the FHWA share of these institutional activities.

RIGHT-OF-WAY REVOLVING FUND

The program objective of the Right-of-Way Revolving Fund is to allow States to acquire highway rights of way significantly in advance of construction by providing interest free loans to States. To ensure continued prudent management of this Federal program, FHWA proposes a limitation on direct loans of $47.850 million.

CONCLUSION

In conclusion, we have put together a responsible budget both in terms of fiscal restraint and meeting the critical requirements of the highway infrastructure.

The total highway budget for fiscal year 1991 complements the Department's National Transportation Policy, supporting goals such as improved highway safety, minimizing user fee evasion, ensuring a healthy motor carrier industry, emphasizing environmental concerns and rehabilitating the highway network.

Once again, thank you for this opportunity to testify today on our fiscal year 1991 budget request program. I would be pleased to address any questions you may have.

HIGHWAY TRUST FUND BALANCE

Senator **Lautenberg**. Thank you very much, Dr. Larson.

Dr. Larson, it is safe to assume that the Federal Aid Highways Program and the highway trust fund are going to be extended beyond the current authorized period. At that time, the "Highway" account is expected to have an uncommitted balance in excess of $6 billion. Therefore, it would seem to me that the "Highway" account can support a higher level of commitment during the next authorization period.

Does DOT have a position on future use of this estimated balance of uncommitted funds?

Dr. **Larson**. Mr. Chairman, the question of the highway trust fund has been one that has had a great deal of visibility in recent months.

If I may give perhaps a somewhat expanded reply to that—with your permission, sir?

Senator **Lautenberg**. As unexpanded as you can make it.

Dr. **Larson**. I should have said expanded, sir.

Senator **Lautenberg**. You did say expanded. I said unexpanded. Be as brief as you can.

Dr. **Larson**. OK. I will be somewhere between the two.

The balance traces back a long time in history, perhaps back to the mid-1960's, when it started to accrue. For the last decade, it has essentially been where it is now: up and down just a bit. The most recent large number was in 1979, when it was approximately $12.5 billion.

The estimated balance in the "Highway" account, as of April 30, is $11.5 billion. Commitments against the account estimated for the same time are $39.4 billion.

There is, of course, a requirement that we be able to meet future obligations with the current balance plus 2 years of income stream. That means, in brief, that we have about one-half of a year's income stream that is available for an expanded program. And yes, Federal Highways has looked at that, going back several months, years perhaps, before I came on the scene. It would be possible to have an expanded program for several years using that balance. But, of course, as is very much in the news today, that plays on the whole question of the national budget.

Here I will stop my remarks.

HIGHWAY NEEDS

Senator **Lautenberg**. Well, the question, for me, anyway, is this. Is there need out there? Is there work to be done that is not being done? Whatever programs there are that the trust fund feeds, I assume we are looking at some significant work that remains to be attended to.

So is this primarily a budgetary consideration, because, as you closed your remarks, that was your point of reference?

I am one of those who takes the view of, well, I won't say budget be damned, at all, because we have a very serious problem. But the fact is that we also have an obligation under law, an obligation to get on with dealing with the problems, whether they are repair, extension of roads, bridges, tunnels, you name it.

So, what you are saying to me, as I understand it, and you have a wealth of experience in transportation, is that this is more of a budgetary consideration than it is a needs consideration.

Dr. **Larson**. I believe, Senator, that it is both of those things. This year, again, as you suggested in your opening remarks, this is a bridge between where we have been and where we perhaps should be. But we will, under this budget, make progress and have made progress. The number of deficient bridges has gone down slightly.

Senator **Lautenberg**. There are still a lot of them left.

Dr. **Larson**. There are a lot of them out there. But we have made some progress and we would continue to do that.

The condition of the interstate system, part of it has declined slightly, part of it has improved somewhat. So we are essentially holding our ground.

The answer to your question concerning unmet needs is clearly there are large unmet needs out there. Yes, sir.

COST TO COMPLETE

Senator **Lautenberg**. As of January 1, 1988, the Department estimated the remaining costs to complete the interstate system at $16.3 billion, of which $14.8 billion is the Federal share.

This is an overall cost increase of $3.9 billion from the total cost in the 1987 interstate cost estimate.

What have we done to analyze the needs necessary to expand the interstate beyond the currently authorized lane miles?

SYSTEMS OF NATIONAL SIGNIFICANCE

Dr. **Larson**. First, Mr. Chairman, on the interstate system as it is presently designated, we are coming to closure on that. One of the significant things that is underway now is an update of the cost estimate. Of course, that keeps moving ahead because, as inflation and other factors impact the overall economy, so do highway costs go up. That estimate will be a very important document to give a dimension for what the bill is still to be paid for that system.

Beyond that, the thinking of the people in the highway community—and it goes to the States, to the Federal, as a matter of fact, you can trace it back almost to the beginning of our thinking about highways—is the notion of a system of national significance. In that system of national significance, there would be an expanded mileage that would have high priority—perhaps not the same priority as the interstate system, but would, in fact, have a high priority. The best current thinking of that is that it would be perhaps 4 percent of the entire highway network in the United States, or 150,000 to 155,000 miles.

Many of the States have already identified those miles. But that is the expanded system. It would include the interstates plus other roads that would have very high national impact.

SECOND INTERSTATE PROGRAM

Senator **Lautenberg**. I think that, then, raises another question. With the congestion, the high volume of use that we are seeing in highways across the country, is a second interstate program needed to cope with the Nation's escalating congestion problems?

Dr. **Larson**. If I may, Mr. Chairman, I will give an opinion that is perhaps more personal than official here. But I will stand by it.

Senator **Lautenberg**. Try to clean up your language, Dr. Larson, and stick with your obligation as the Administrator. [Laughter.]

A personal view can never be separated from the professional, lofty position that you hold. So just shoot.

Dr. **Larson**. All right.

I would be inclined to think that we should declare victory on the interstate system. It has been around for a long time. I think we ought to say that we have done it. It is a massive accomplishment. Everybody can take great pride in it. Then we ought to work with it and make it work better.

Senator **Lautenberg**. So the early estimates of use and program strategy, notwithstanding that it was done so long ago, remains short by probably geometric factors from our real needs. You would still say let's declare victory, it's done with, and we ought to tinker with it, or just modify it from where it is, as opposed to really going through a whole evaluation?

Dr. **Larson**. Well, I, again, would probably come down someplace between what I heard you saying and what I may have said as a compromise position.

It would be that this system of national significance is far more important than perhaps some might have thought it to be.

It, for example, would accommodate perhaps 70 percent of the commercial traffic, this very limited system. We propose to have pavement management requirements, bridge management, congestion requirements, safety requirements that would make this a very special system. So, rather than saying we are just going to tinker with the interstate system, the proposal might well be to take a much larger system that gets at much more of the country's needs and then try to bring it up to a significantly higher standard.

Senator **Lautenberg**. By agreement with my colleague, Senator Grassley, we are going to yield some time to Senator Mikulski, who is chairing another hearing.

So, Senator, if you need 10 minutes, why you've got it.

STATEMENT OF SENATOR MIKULSKI

Senator **Mikulski**. Good morning, gentlemen.

Senator Grassley, I thank you for yielding. We are holding our public witnesses in our Appropriations Subcommittee, of which you are a member, and I must return expeditiously. I ask that, in the interest of time, my statement be entered for the record.

[The statement follows:]

Statement of Senator Mikulski

I'm glad to have the chance today to ask a few questions of Mr. Larson and the Federal Highway Administration [FHWA] concerning an issue of great concern to motorists in my State, the State of Maryland, and in every other State.

That issue is: Can FHWA ensure that contractors doing work on Federal highways are fulfilling their obligations in a safe, responsible manner?

On August 31, 1989, during the concrete pouring construction phase of the bridge over which Maryland Route 198 crosses the Baltimore-Washington (Gladys Noon Spellman Memorial) Parkway in Prince George's County, Maryland, the bridge collapsed on the parkway, injuring 14 people.

Immediately following this accident, I successfully included language in the fiscal year 1990 transportation appropriations bill directing FHWA to investigate and report on the cause of the bridge collapse and assess the safety of other bridges and ramps being upgraded on the Baltimore Washington Parkway.

Furthermore, when FHWA wanted to resume work on other bridges over the parkway, I got the work halted until I was satisfied that my questions were adequately addressed.

The report required by the Congress was submitted late last year. It determined that the contractor was using inferior and inadequate supports (falsework) during construction.

As a result of this serious accident, the State of Maryland's Occupational Safety and Health Office has proposed the contractor be fined more than $900,000 for violations of job safety laws.

In addition, the Inspector General's Office of the Federal Department of Transportation is conducting an investigation into possible criminal violations.

I commend the Federal Highway Administration for its efforts to date in investigating this accident in response to the directive of the Congress in last year's transportation appropriations bill.

However, I question whether FHWA has adequately improved its procedures to ensure that this sort of accident never happens again.

FHWA has adopted new procedures to prevent falsework failures on projects for which it has contract administration responsibilities.

However, there is a great deal more to road construction than falsework. There is maintenance of traffic, making sure adequate signs are posted, guaranteeing that the construction materials are adequate and appropriate, and many, many other details.

The direct cause of the Route 198 bridge collapse may have been inadequate falsework. But the real problem was contractor negligence.

The report by FHWA's Board of Review said it's not FHWA's responsibility to ensure that work done by a contractor or subcontractor complies with the terms of the contract.

If FHWA is not responsible, and the contractor is negligent, who is there to see that the public is not endangered? Even if the mistake was unintentional, how do we protect the public from errors of this nature?

I hope we can obtain answers to these questions today. I intend to do all I can to see that the public is protected from contractor negligence that could pose life-threatening hazards on our highways.

BALTIMORE-WASHINGTON PARKWAY BRIDGE COLLAPSE

Senator MIKULSKI. Thank you, Mr. Chairman, for interrupting your own questioning to yield to me.

Mr. Chairman, I want to focus some questions today on what happened on Highway 198 and the Gladys Spellman Parkway.

As everyone recalls, on August 31, 1989, during the concrete pouring on the bridge, there was a terrible collapse and the injuring of 14 people. Immediately after the accident, thanks to your cooperation, Mr. Chairman, we were able to include language directing a thorough investigation.

I commend the Federal Highway Administration for its efforts to investigate the accident and today I would like to really pursue how we can make sure that it doesn't happen again.

Mr. Larson, first of all, good morning to you and the members of your team. Several of my questions are these.

The Federal highway law directs States to be extremely diligent in screening companies that are awarded State contracts. Could you tell us not only how you screen companies but also how you made sure that there was proper inspection during this project? In other words, what happened to the Federal inspections during this Federal project?

Dr. LARSON. If I may, I am going to ask Mr. McCormick, the Deputy Administrator, to speak to this. He has been intimately involved, and I think can give the kind of first-hand response that this question deserves.

Gene.

Mr. McCORMICK. Senator, the incident of August 31 certainly was an incident of concern to us within the Federal Highway Administration. As a matter of fact, I personally was on the scene within an hour of the incident.

We undertook what we thought was a very thorough, internal review of the circumstances which led up to the failure, both on an internal basis and through an external source, an independent consulting firm, to review the engineering plans and processes that led to that event.

Those findings were shared with an independent board of review. That independent board of review, as you well know, supported our effort throughout and came to its conclusions and recommendations in late December.

Basically, the Federal Highway Administration fully recognizes our safety responsibility to the motoring public and we are very concerned about it. We have instituted a series of further internal requirements in terms of our own engineering review of projects within our control. We have also shared the results of the findings and recommendations——

SAFETY EFFORTS ON BRIDGE CONSTRUCTION

Senator MIKULSKI. Mr. McCormick, I don't mean to interrupt, but that describes the process of the investigation. We welcome that and I am sure the chairman would like it for the record. But my question is where in the dickens were the Federal inspectors that were looking at the falsework, making sure that the contract was reliable, and where are they now, when concrete is being poured on federally funded projects?

Mr. MCCORMICK. Well, actually, the inspectors were on the site in the morning, inspecting the concrete that was being placed at that point in time.

Senator MIKULSKI. Why didn't they see the falsework?

Mr. MCCORMICK. It was a sudden failure, obviously, and the cause of the failure resulted from, basically, inadequate installation, if you will, according to the design plans that had been approved by us.

One of the recommendations, one of the things we have set in motion ourselves, is to require a twofold inspection of similar falsework installations in the future, one on the part of a professional engineer in behalf of the contractor, one on our own part in the sense of our inspection.

Senator MIKULSKI. So you won't just rely upon what a professional contractor said, is that right?

Mr. MCCORMICK. That's correct, in the future.

Senator MIKULSKI. I mean, someone hired by the contractor.

Mr. MCCORMICK. A registered professional engineer, plus our own field inspection and approval of the installation before it is actually used for construction purposes.

So it is a twofold effort.

Senator MIKULSKI. This, then, goes to who takes responsibility for the contractor mistakes.

The report by the Federal Highway's Board of Review said that it is not Federal Highway's responsibility to ensure that the work done by a contractor or subcontractor complies with the terms of the contract.

Well, then, who is responsible?

Mr. MCCORMICK. We certainly have a responsibility for public safety. The purpose of that language in the report was meant to identify the contractual responsibility which the contractor has in terms of his construction of that temporary structuring.

Senator MIKULSKI. But the safety responsibility, the analysis for safety, is ours, isn't that correct?

Mr. MCCORMICK. We must be concerned about that. The previous role of the Federal Highway Administration had been simply to approve the plans and design for the falsework in advance of its utilization, and had depended upon the contractor responsibility for the inspection in the field. That has changed.

CONSTRUCTION SAFETY PROCEDURES

Senator MIKULSKI. Well, I know that after the accident, the Federal Highway Administration did adopt new procedures to monitor this falsework failure. But I am concerned that the new procedures don't go far enough because the real problem seems to be contractor negligence, and also there is more to construction than the falsework. There is the maintenance of traffic, signs, guaranteeing construction materials, the installation of materials, and so on.

What is different now, today, about these procedures than there was the day before the accident?

Mr. MCCORMICK. Well, probably the most significant thing is that which I referred to already in the sense of a very active approval process before the falsework is actually used for construction, both on the part of an independent, professional engineer and on the part of our own people, to look at the field installation to assure that it conforms with the earlier approved plan. That was the weakness that was determined in this particular situation that we strengthened.

CRIMINAL INVESTIGATION ON BRIDGE COLLAPSE

Senator MIKULSKI. I now want to go to the status of the criminal investigation. Could you tell us what that is?

Mr. MCCORMICK. The Department's Office of the Inspector General, upon our request at the end of December, has basically instituted an investigation. He is coordinating his effort with the U.S. district attorney in Baltimore. Records have been subpoenaed. Interviews have begun. The investigation is ongoing.

Senator MIKULSKI. So, the criminal investigation or the possibility of bringing indictments is now in the hands of the U.S. attorney in Baltimore, Mr. Breckenridge Wilcox, is that correct?

Mr. MCCORMICK. In conjunction with our Office of the Inspector of General in the Department of Transportation.

CONSTRUCTION INSPECTION WORK FORCE

Senator MIKULSKI. It is not the purpose of this hearing to go into those details or in any way to impede the investigation. But this, then, takes me to two questions related to appropriations.

Do you feel that you have enough inspectors in the field and that there is an adequate enough training budget to deal with these kinds of safety demands?

Mr. MCCORMICK. I feel very comfortable in the sense that the internal recommendations and policies that we have instituted will address and minimize the risks. There is always the risk of an accident. But we take it very seriously, to make sure that it's absolutely minimal.

I feel very comfortable that our people have been trained and are taking appropriate actions in terms of this sort of question.

Senator **Mikulski**. Mr. Larson, do you feel that you have enough inspectors to make our highways safe during their construction phase?

Dr. **Larson**. Yes.

I think that the position we are in now is one that I feel comfortable with. Yes, Senator.

Mr. **McCormick**. Senator, there is another whole second dimension to the question, which I did not mean necessarily to suggest.

What we were talking about were Federal lands projects, where we have a direct construction supervision responsibility. The vast majority of the highway program throughout this Nation does not fall into that category. You know, the regular Federal Aid Highway Program is carried out through the State and local governments. So I did not want to make my statement, in terms of our particular, small component of that program, imply that that may not be a problem elsewhere.

Senator **Mikulski**. How would you recommend that we protect the people elsewhere?

Mr. **McCormick**. Well, what we have done with the States and through our field offices is basically share with the States, and they, in turn, with the local governments, the conclusions and findings of this instance, the implementing procedures that we ourselves are changing, have changed, encouraging them to look closely at this.

Incidentally, there was a mishap about 1 month ago in Minnesota that is somewhat similar to this. So it is a major area of concern that we are trying to work on concertedly with the States. But it is a broader problem than just the Federal Highway Administration.

FEDERAL FUNDING CONTINGENT ON SAFETY STANDARDS

Senator **Mikulski**. Mr. Chairman, you are being very indulgent. I just want to ask one followup question and then I will conclude.

Do you think it should be a condition of getting Federal funds that they institute the type of safety procedures that you have talked about on those projects, like we are doing in Maryland—essentially, an opinion and a second opinion that if it's good enough for gall bladder surgery, it is good enough for highway construction?

Mr. **McCormick**. We are taking a close look at that entire question. We are very sensitive to that.

Senator **Mikulski**. When you are taking a close look, what would that be?

Mr. **McCormick**. We are working with the States and the industry, the construction industry and the scaffolding industry—this particular application was scaffolding—in trying to develop what you call firm, safe specifications to be used.

Senator **Mikulski**. And then, do you think that should be the condition for getting Federal funds?

Mr. **McCormick**. I think it is certainly something within the overall confines of the program that should be considered, like many other elements of the program, as well.

Senator **Lautenberg**. Senator, if you asked me that question, I'd say yes.

Senator **Mikulski**. Senator Lautenberg, what do you think we ought to do?

Senator **Lautenberg**. I think that we ought to condition the funds upon a safety standard that we can feel good about, knowing that we are doing the most that we can to protect our passengers or our travelers.

I am a little surprised to hear this constant hedging, if you will, that says, "Well, maybe we ought to consider it." The fact is that I think this is one place where the Federal Government has not only an opportunity but an obligation to say,"Hey, you are spending our money, that of taxpayers from all over the country." It is being used in connection with work that we think is important to the whole system, but also to the protection of the traveling public.

Senator **Mikulski**. I thank the chairman. I look forward to working with him on drafting the language.

I would like to say that it is really a pleasure to work with somebody who puts safety first.

On safety in the skies, we look forward to working with you and implementing the Commission's reports on terrorism, and so on. If we do nothing else in this committee but work for public safety, whether it is in the skies or on the highways, we have done more than a lot of other people.

Senator **Lautenberg**. Also, your little State, your powerful little State, Senator, had the unfortunate tragic accident on rail as well.

Senator **Mikulski**. That's right.

Senator **Lautenberg**. It is a busy place and we have to make sure that the things we do are effective.

Senator **Mikulski**. Thank you, Mr. Larson. We look forward, again, to working with you to build those highways and to build them the way they ought to be.

Thank you, Mr. Chairman.

Senator **Lautenberg**. Thank you very much, Senator Mikulski. Senator Grassley.

AVENUE OF THE SAINTS

Senator **Grassley**. Yesterday, Dr. Larson, the Department of Transportation issued their report and recommendations concerning the Avenue of the Saints.

This was in response to Senate Report 100-411, and the price of that report was $400,000. After reading your report, I and a lot of other people in the Midwest were a bit confused as to what exactly DOT was recommending. All you have to do is look at the morning clips that have come in over the telecopier to give you an example of some dismay, as well as some wonderment.

I wonder if you could clear up a few things.

Does DOT recommend that route B is the best route for the Avenue of the Saints?

Dr. **Larson**. Yes; it does make that recommendation in the letter referenced.

Senator **Grassley**. The report you sent to the Congress identified route B as the best route, in your words, "If a decision has to be made today."

What is meant by this phrase and doesn't this cloud the selection of the route and detract from the consultants' studies and its recommendations?

Dr. LARSON. Senator, the language was language worked on very carefully, and the intent was to say as of this point in time, route B is the preferred route. In the document, there is a benefit/cost justification provided for that position. But we also go on to state that in the present context, there is not a vehicle, if you will, at least past September 30 of next year, for this kind of program. And so, as we look forward to the potential for a system of national significance, there may be more than one corridor that will, in fact, fit under that rubric.

So what we were trying to say is that as of this point in time, without a program, really, that covers this kind of project, this is our recommendation and we so state on paragraph 3 of page 2, as I recall. But we wanted to draw this broader framework for the potential that might exist in this corridor for these States, as we move forward toward reauthorization.

AVENUE OF THE SAINTS AND HIGHWAY REAUTHORIZATION

Senator GRASSLEY. Well, in regard to that reauthorization and your mention of it and the fact that later on we might be in a better position than at present to decide whether the Avenue of the Saints can be developed and which corridor would be preferable, the steering committee presented to the Federal Highway Administration a very technical engineering study using professional expertise. How will the engineering factors, the travel efficiencies, the benefits in cost, and ultimately the recommendations of this study be affected by what happens during the reauthorization process?

Dr. LARSON. The most likely opportunity and potential for change from now would be that additional routes could be included in the system of national significance, so that there might be other opportunities in addition to the corridor B that is identified in the correspondence.

Senator GRASSLEY. Along that line, what I think you and your predecessors and probably your successors feel about highway construction is it ought to be made on a technical basis, experts in transportation making it, as opposed to politicians making it. This and your traditional opposition to demonstration projects leads me to the point that maybe you didn't intend it in your recommendations yesterday, but, in fact, you are inviting very much political considerations on these important things.

I would just point to three quotes in one of the newspapers reporting this morning.

It says, "Backers of an Illinois route said that they were pleased with the report, adding that any final route should be a political one, not a bureaucratic one."

Now, I read bureaucratic not just to mean appointed people, but to include technical experts.

Another quote: "This decision is not going to be left to a group of bureaucrats."

Third, a person said, "The route's decision should be technical, as well as a political one."

So I don't know. Maybe in the final analysis it won't be political. But I think that you try to avoid in your Department the promotion of political determinations, as opposed to technical determinations on a highway being built, and I think you have the effect of throwing it back into the laps of Congress by the statements you make following on the third page of your letter, that you just might be doing that.

I guess I need to give you an opportunity to respond. But you did answer about the impact this would have. So let me then go on to another question.

AVENUE OF THE SAINTS ROUTE RECOMMENDATIONS

Do you feel that the recommendations of the Steering Committee for route B were flawed in some way? If so, in what way?

Dr. **Larson**. No.

I think the report, while it was not perhaps as clear-cut, as single-minded as we might have desired, it did give a cost-benefit position that we could identify and support, and we did so.

Senator, the complexities of this project are enormous, as every observer would know. It would seem to me, again, looking to an expanded program for surface transportation for highways, the opportunities in corridors like this will be identified and recognized. I think that is the burden of this ambiguity that you rightly point to.

SYSTEM OF NATIONAL SIGNIFICANCE BACKGROUND

Senator **Grassley**. Well, I come from a State where at least there has been a history, a long, long history of very little, if any, State legislative interference in the road-building process. This may not be true of most States, though I hope it is true of most States.

It is with this background that I make the plea to you that we not encourage the political process to interfere with these studies, particularly when we go to the extent of spending $400,000 to make a technical study.

You refer to the highway system of national significance as a possible option for funding the Avenue of Saints, as well as other highway systems in the United States. My understanding is that the idea of a system of national significance was developed in conjunction with the American Association of State Highway Transportation Officials.

Could you give us a little bit of the history of the development of this idea, specifically when this idea was first discussed.

Dr. **Larson**. Senator, if I may, I am going to talk to our institutional member, the Executive Director, who, if he may, may speak to that question.

Senator **Grassley**. Surely.

Dr. **Larson**. Mr. Carlson.

Mr. **Carlson**. Really, it gets back to the start of the consideration of the interstate system, which started, really, in 1939, under President Roosevelt. A report was put out, "Toll Roads and Free Roads," and it was followed by a mapping of the interstate system in 1944.

It didn't have the terminology, "System of National Significance." That has been applied off and on since about 1972, and most recently in 1987 and now in our proposed reauthorization, and in the Secretary's policy statement, it indicates that highways of national significance should be where the Federal Government puts most of its attention.

Senator **Grassley**. And so, we will be considering, when we consider our national system of expressways, an idea that is relatively old, as far as highway thought goes.

Dr. **Larson**. I think the concept has been around that there ought to be some clear division between the several categories of roads and between the several sources of funding. That idea is, indeed, an old idea. But it is being sharpened up, I think, in a particular way as we prepare for this reauthorization. The States have been very clearly involved. Iowa, New York, and New Jersey have played significant roles and will play the principal roles in identifying the components.

The Federal Government will be a facilitator. The States will be the source of the basic information.

HIGHWAY TRUST FUND SPEND-DOWN

Senatoı **Grassley**. Unrelated to the Avenue of the Saints and the national system of expressways, as we go into the next budget, as we are going to be going into the decisionmaking process of this subcommittee and looking ahead to the new reauthorization, what is the administration's and your view on the spend-down of the highway trust fund?

Dr. **Larson**. The policy statement that was issued by Secretary Skinner and the President on March 8, on page 56, as I recall, says that we will spend down the trust fund in a fiscally responsible way. I think that is as close as I can come to a statement of policy. That, to me, means that there are some opportunities. We have spoken to those opportunities, and those opportunities are to be realized as we move forward.

Senator **Grassley**. In closing, in regard to your report yesterday, I guess I expressed to you, or to the Secretary, in a letter as well as to you over the phone, my disappointment with the ambivalence of it. I know that maybe that is not the intent, but that is the outcome. I hope that in the letter that I wrote to Secretary Skinner, you will consider that, particularly the invitation of politics into the process that you abhor, and that you will see if maybe a more definitive answer can be given.

Thank you, Mr. Chairman.

Senator **Lautenberg**. Thanks very much.

Welcome, Senator Harkin. Senator, I would invite you, if you have a statement, to perhaps have it inserted into the record. Otherwise, proceed with your questions as you would like.

Senator **Harkin**. I believe my statement should last about 30 minutes. Is that all right?

Senator **Lautenberg**. I will say that we will probably take a discount of about 20 on that. [Laughter.]

I am ruled by the clock and not by my heart.

Senator **Grassley**. We all have to punch the clock around here.

Senator **Lautenberg**. Yes.

Senator Harkin.

ROUTINE SELECTION UNDER HIGHWAY OF NATIONAL SIGNIFICANCE

Senator **Harkin**. Mr. Chairman, thank you very much.

Mr. Larson, I want to follow up on what my colleague from Iowa was just talking about with regard to the Avenue of the Saints.

I read your letter with interest yesterday, and I just heard you respond to Senator Grassley. You said that the Department is recommending the B route. Is that what you just said?

Dr. **Larson**. That is the statement that I cited from page 2 of that letter. Yes, sir.

Senator **Harkin**. I think what causes confusion is on page 2. At the bottom, you say:

> The Department's recent National Transportation Policy Study included a recommendation that in the future the Federal Aid Highway Program focus on systems of national significance. The Department's preliminary opinion is that routes B and D may be the types of routes envisioned.

Then, on the top of page 3 you say:

> Following reauthorization of the Federal Aid Highway Program, the States will be in a better position than at present to decide whether the Avenue of the Saints can be developed and which corridor is preferable.

How are the States going to decide that? How do the States decide the preferable corridor? Do you mean you leave it up to the States to decide that? This is Federal money we are talking about.

Please explain to me how the States will be able to decide whether: (*a*) an Avenue of the Saints can be developed, and (*b*) which corridor is preferable. What mechanism is there for the States to decide that?

Dr. **Larson**. The mechanism that is suggested, Senator, is the process of identifying the system of national significance that you referred to earlier. As Mr. Carlson noted, this is a concept that has been around for many years, and at no time has the Federal Government taken a preempting role on identifying those miles. It has been a dialog between the States, the States to each other, and the States with the Federal Government.

That process was started some months ago. There has been a process of identifying possible routes for a system of national significance with AASHTO, the American Association of State Highway and Transportation Officials, providing a lead role. That process will go on as we move forward in this concept.

So it will be State to State, and State to Federal Government, and the Federal Government has not, at any time, tried to dictate a precise location, given the many unique, local features that have to be considered.

Senator **Harkin**. Did the Federal Government dictate locations in the interstate highway system?

Dr. **Larson**. To my knowledge, the interstate highway system was a negotiated process. The Congress was involved, the States were involved, everybody was involved in identifying those miles. There was never a declaration until, in fact, the legislation passed, of precisely what the mileage would be. Then there has been some modification, not a great deal, since that time.

We are now at a slightly larger mileage. Maybe Mr. Carlson can give a more precise explanation of how the interstate mileage was divined. But I think I am accurate.

AVENUE OF THE SAINTS ROUTE SELECTION

Senator **Harkin**. I don't want to get into that. I want to find this out. You are stating that, as far as you are concerned, route B is the route that should be followed, and that route B has been decided upon by the study that Senator Grassley referred to. But now you say that somehow the States are now going to be involved to determine which corridor is preferable. But the corridor has already been determined, has it not? I mean, can't we put this to bed?

Dr. **Larson**. The point that I tried to make in response to Senator Grassley's comment was that as we identify the system of national significance, it may well be that there will be additional mileage in this corridor, in this Avenue of the Saints corridor, that the States and the Federal Government might opt to support as a desirable addition to the overall system. I think that was the context.

Senator **Harkin**. I see. There may be additions beyond the B corridor?

Dr. **Larson**. That is precisely the point that we are trying to make.

Senator **Harkin**. They may be beyond that.

Dr. **Larson**. Yes; and at this time B is a preferable corridor; but there may be additional routes that would have this identification.

Senator **Harkin**. Beyond that?

Dr. **Larson**. Beyond B, yes, sir.

Senator **Harkin**. Not in substitute or in lieu thereof?

Dr. **Larson**. Not in substitute thereof.

Senator **Harkin**. Well that clears that up, then.

FEDERAL FUNDING FOR AVENUE OF THE SAINTS

Mr. Larson, it is my view that it would be difficult for the States to build the Avenue of the Saints without Federal support above the amounts that are expected in the highway reauthorization.

I think it is no secret that I intend to see the Avenue of the Saints funded as a part of the highway reauthorization legislation in a fashion that will provide the States with Federal support above the block grants that they would receive, including the normal allocation under the regular "Highways of national significance" account.

To wait until after enactment of that measure would be to probably delay the major Federal funding for 5 years or more.

PROJECT SELECTION AND FEASIBILITY

I would like to ask just a couple more questions about the economic criteria that the Federal Highway Administration uses or recommends to be used to determine if a road can feasibly be built.

As far as spending Federal dollars on highway construction, where there is discretion or where there will be discretion in selecting the project, what are the major criteria to be considered in determining such a route and the feasibility of building it at all?

Dr. **Larson**. Well, one of the feasibility factors clearly rests on the local communities. It comes down to social and environmental impacts. There is a nationally prescribed process for getting clearance, particularly on the environmental side. That is often a protracted process to work through.

Beyond that, there are a variety of economic impact factors. We are beginning to understand more that highways do have a very significant, positive impact on the economics of communities. That has to be worked in close conjunction with both the political and the business communities as we move forward.

The time lag on a process is usually a multiple decade process for something of this size. One can start as soon as clearances are provided. But a project of this scope is something that does take a lot of time, given all the constraints that we face as we move forward.

Senator HARKIN. Specifically in regard to the Avenue of the Saints, your letter of yesterday said that if a decision had to be made today, route B would be the preferred alignment.

Dr. LARSON. That is correct, sir.

Senator HARKIN. What factors would you perceive are likely to change that view over the coming 12 months or the next few years?

Dr. LARSON. Again, the potential for other locations, in addition to—to make the point that we made a few moments ago—and the potential for refinements required to avoid environmental and other kinds of consequences that might be discovered as the probe goes deeper, beyond where it has to this point.

Senator HARKIN. But that also was included in the study, was it not?

Dr. LARSON. That's right.

Senator HARKIN. I mean, not a full study of the environmental impact, but there were environmental considerations taken into consideration?

Dr. LARSON. A scan of the condition. Yes, sir.

FEDERAL BRIDGE PROGRAM

Senator HARKIN. Apart from the Avenue of the Saints, I would like to discuss the Federal Bridge Program.

Can you tell me what is the total amount of project requests that you have received under the discretionary bridge program in fiscal year 1989? What is the total amount of funding that you expect to receive in fiscal year 1990?

Dr. LARSON. I asked Mr. Carlson if we could cite that exact number. If we may provide that for the record, I cannot give you the exact number for that, sir, now.

Senator HARKIN. Then could you give me that for the record?

Dr. LARSON. Yes, sir.

Senator HARKIN. I would be interested in the total amount of project requests that you have received under the discretionary program for 1989 and the total amount of funding you expect to receive in fiscal year 1990?

[The information follows:]

DISCRETIONARY BRIDGE PROGRAM

Funding	Expenditures	
	Fiscal year 1989	Fiscal year 1990 (to date)
Carryover	$1,605,233.51	$2,202,920,72
Appropriation	225,000,000.00	225,000,000.00
Deductions	15,230,046.00	27,336,819.00
Beginning balance	211,375,187.51	199,866,101.72
Net allocations	209,172,266.79	193,264,731.34
Ending balance	2,202,920.72	

	Requests	
	Fiscal year 1989	Fiscal year 1990
Requests	$670,034,000.00	$757,229,300.00

Mr. CARLSON. We will get our appropriation, our normal appropriation for discretionary bridges for 1990, which is about $200 million. We have requests for continuing bridges. We have had the position that, generally, once we start funding a bridge with discretionary funds, although not absolutely certainly, we do try to fund it through to conclusion. The amount of outlying obligations for bridges that are not completed yet is something that last year was in the neighborhood of about $150 or $160 million of that $200 million figure.

I don't know what that will be this next year. We have put out our request for candidates for the discretionary bridge fund for fiscal year 1991 money now. It is out being responded to by the States.

ESTIMATES OF BRIDGE FUNDING

Senator HARKIN. Do you have any projections of what the Department expects to receive in requests in each of the coming 2 years? Don't you have to have an estimate of that?

Mr. CARLSON. Well, we only have one more year's funds available to distribute, unless Congress reauthorizes the Federal Aid Highways Program. So, no.

Generally speaking, the request for discretionary bridge funds has probably run very easily into the $600 or $700 million a year range. We have had about $200 million to give out, plus we have tried to complete the bridges that we have started.

So the amount of needs out there and the requests out there has been considerably higher than we have been able to fulfill.

Senator LAUTENBERG. I would ask the Senator to wrap up shortly, if he can.

Senator HARKIN. I have some more questions but I will submit them for the record.

CONGESTION

Senator LAUTENBERG. OK. Thank you very much.

Mr. Larson, I want to discuss some of the problems that are so apparent in my region, like congestion. We talk about the mobility of our people being jeopardized as traffic congestion continues to escalate at an alarming rate. Between 1983 and 1987, alone, the percentage of rush hour travel under congested conditions on urban interstates has increased from 54 percent to 65 percent.

Federal highway forecasts have predicted that if no mitigating actions are taken by the year 2005, the Nation will spend 3.9 billion hours annually sitting in gridlock traffic and, of course, spewing out contaminants into the air.

Does the Federal Highway Administration have a strategic plan for dealing with the problem? If so, please tell us what that plan is. If not, why not?

Dr. LARSON. Yes, sir; we do have a strategic plan. It starts all the way back with a strategic plan for the entire transportation system of the country in the Secretary's policy statement and a strategic plan for action in there. In there, there are 65 specific calls for action, including action in the highway arena.

Coming down closer to home, in the quote that you cited, Senator, there is one key phrase, and that is if nothing happens, or if there are no mitigating circumstances. Those mitigating circumstances are always underway.

Last week, I drove on I–78, which connects into your State and provides for a very significant improvement in the Allentown-Bethlehem-Easton and on into New Jersey and New York area.

That work is ongoing. In key places around the country, there are improvements being made all the time, and that is where this flow of money is going.

That is part of the strategy, to keep a thrust on providing capacity. As a matter of fact, that is the first of the six major themes of this report, to maintain and expand the existing system.

Beyond that, the sixth theme of that report goes to new technology. I will jump there and say that we have things like Transcom, like Travtech, like Pathfinder. These are acronyms for high technology improvements to ensure that we get the best use out of the systems that we have, a variety of electronics techniques being applied to the systems that we have.

Some of them are very simple, like ramp metering, flow of traffic lights so that you can flow the traffic as a stream. We have a variety of things underway there. So, all the way from capacity to electronics, there is a plan. We are moving aggressively on that. We are increasing our research for the electronics components by some $13 million this year.

ROUTE 78, NEW JERSEY

Senator LAUTENBERG. But I think it is fair to say that whatever decisions you come up with mechanically or electronically, there have to be options for the driver, options for the traffic management enforcement people. If all goes well and you find out that there is an hour's wait on I–78, you'd better give them an alternative as opposed to saying OK, get off on rural roads in Pennsylvania and New Jersey and wait there.

I was interested in your comment about Route 78. You know that 78 is a very new highway in our area. I recommend that, when you have nothing to do some morning, just ride through its rush hour. I have done it, not because I had nothing to do but because I wanted to get someplace. Unfortunately, I was thwarted in my dream because it is congested.

The fact that you lay out a program and you, again, having the skills and the experience that you have know very well, as in the words of Yogi Berra, a neighbor of mine in New Jersey, who said, "It ain't over till it's over," that the fact is, you cannot take a lot of satisfaction, in my view, out of having designed a route that, as soon as it's completed, is suddenly filled with traffic, because what we did is open up areas for housing and uses that heretofore were unavailable.

So I don't know at what point you can say OK, declare victory—to use your earlier expression—and say it's done.

TRAFFIC ESTIMATES

Is it ever really done, or is this a dynamic, volatile kind of thing that is constantly taking traffic increases into account? When were the first serious estimates of need done for the Federal Highway Interstate Program?

Dr. LARSON. Probably in 1939 was the first serious look at this program.

Senator LAUTENBERG. Were there traffic estimates then?

Dr. LARSON. There were traffic estimates almost from the beginning.

Senator LAUTENBERG. Are we still living by our words on those estimates?

Dr. LARSON. Senator, I think the phrase that you used, the dynamic situation, is clearly what we face.

We now have 180 million vehicles and 160 million drivers, for example. The popularity of this mode of mobility is so obvious and so much grasped by our population that we are in a dynamic circumstance, as is the rest of the world. We are certainly not unique in this.

I read papers from Germany, France, and Britain, and developing countries, like Turkey and South Africa. They cope as best they can, and we try to stay on top of the dynamics of the circumstance from around the world.

PROMETHEUS

Senator LAUTENBERG. Are you aware of the scope of the German research program—what is it called, Prometheus?

Dr. LARSON. Prometheus, yes, sir.

Senator LAUTENBERG. Do you know how much they have committed to that program?

Dr. LARSON. Well, the estimates range from $800 million to over $1 billion.

Senator LAUTENBERG. And we have how much? It doesn't matter really what currency we are talking about as their currency is pretty strong. We have how much committed to that?

Dr. LARSON. We had a conference, Senator, on this in Florida last week, and it turns out that our program is stronger through diversity than we might have realized.

There are perhaps 700 professionals in this country working in this arena, and we are certainly into the hundreds of millions of dollars if you take all of the public and private enterprises that are underway.

It is not enough. But, clearly, we are escalating our approach very rapidly. I don't think we have to take a back seat, really.

Senator LAUTENBERG. I don't think we have to, either. It is a question of how we get to that seat and what the Federal Government's contribution is? That is the real commitment. When you put your money on the bar, that is when you are ready to play the game, to use an expression that we say in western New Jersey.

What happens is that if we are going to be serious about this thing, we point to the fact that there is traffic congestion in Germany. I don't know whether you take a lot of comfort out of that. I don't.

Dr. LARSON. No.

Senator LAUTENBERG. I know this. They also impose a heck of a tax on the use of their roads that gets diverted to other things. Our response, with the present administration's policy, is to eliminate assistance for transit, Amtrak, and those things. So what does that do? I mean, we are not going to ask people to walk to work or to walk to play, or to walk to shop. What we are saying is get in your car and hit the highways and move along at a fast 8 miles an hour on average and see if you can get there from here.

I don't see the kind of commitment that encourages me to believe that we are doing anything more, honestly, than housekeeping, than kind of keeping things up to date.

When we talk about a national balanced transportation network—and I have had this discussion with my good friend, Sam Skinner—it means investing in all modes of transportation. It does not mean dropping one. You talk about the affection that we Americans have for the automobile, the convenience that it affords us.

Well, if we are going to permit licenses to be issued, new plates, new registrations, new cars to be sold, and encourage that end of business, then we ought to do something to make sure that we are providing the means to use this very important tool.

When I hear you say that the actions recommended and taken to relieve congestion include some of the research on intelligent vehicles, et cetera, that does not look like it is going to play the part in the congestion relief that we are looking for. I hear from people and, of course, I experience it myself in driving around congested areas like New York, New Jersey, and Philadelphia, why people sit for hours waiting to get through the logjam.

I am hopeful that we will see, again, with the experience that you bring to the job, some innovative thinking, some bold strokes that say OK, we know what the policy is within the administration, but we want to make our own professional evaluation and stand proudly behind it. If we can't afford it, then we will make that decision kind of collectively.

But at least I would like to hear from your Department to say OK, this is what we really need now and we will negotiate to see whether we can get it.

But I don't hear that. I hear a bridge from the old program to the new program and highways of national significance.

In my view, there is a lot that has to be done, including an assessment of the environmental impact, congestion, development, population growth, all of those things.

GAO REPORTS ON TRAFFIC CONGESTION

GAO recently completed two reports for this subcommittee on traffic congestion problems. GAO did find that traffic congestion was getting worse and that many areas across the country could grow by as much as 300 percent between now and the year 2005. They conclude that FHWA efforts to address congestion were, and I use our expression here, diffuse and consequently that a more coordinated strategy for fighting congestion needs to be developed by the Department.

CONGESTION STRATEGY

Since those reports, I wonder whether you have had a chance beyond that which we discussed for developing any kind of strategy for looking further at it? Or are you content with what is in the national program there?

Dr. LARSON. We believe that the national policy statement is a very broad framework. It is not intended to get down to the specifics that are required to deal with problems like congestion. And yes, we have made significant progress in developing a coordinated program for looking at, working on, and addressing this. It ranges from such things as a requirement for a congestion management plan for this system of national significance, an administrative kind of action, to an identification of additional improvements that are needed on the construction—we can't stop that side—to a variety of techniques, all the way from supply to demand management. You have to really work on a very broad base if we are going to make progress.

I think that we have made significant progress, and I take it as a personal challenge to be able to address that now.

Senator LAUTENBERG. Let me ask you a question that can be answered I think very succinctly.

Are we gaining on it or not?

Dr. LARSON. To this point, we are not gaining. But my sense is that we have the tools at our disposal, and I believe we now have the political will to address it, given that in places like San Francisco it is the No. 1 issue on the public's agenda.

Senator LAUTENBERG. I hate to be so cynical, but I think the only thing that is helping to reduce traffic congestion is stolen vehicles out there, taking them apart and getting them off the road. Otherwise, I don't see any gains taking place, I have to tell you.

CONGESTION SOLUTIONS UNDER THE REAUTHORIZATION

What major policy changes, programs, need to be considered to address this problem during the highway reauthorization for Federal highways to be most effective? What would you suggest?

Dr. LARSON. The actions will include a broad range of action. There is no silver bullet here that is going to solve this problem. We are going to have to work all the way from the construction to the research and development side, and that is proposed.

Our research budget this year, for example, went from an almost invisible amount for intelligent vehicle/highways to a request for $13 million, and we see that escalating to $100-plus million. We have made that very clear statement.

We are partners with a wide variety private sector firms. The Government cannot do it alone. We have State and local governments involved.

I think the diversity of this country, recognizing this problem, and our strengths from diversity will lead to some very useful solutions.

IMMEDIATE CONGESTION RELIEF

Senator LAUTENBERG. What can we do, let's say in our region, perhaps one of the most congested in the country? What do you think we could do to bring immediate road relief in those areas? Is there anything?

Dr. LARSON. There probably is no solution for immediate road relief. What we can hope to cope with is the growth in traffic and keep conditions from getting worse and locally make them better.

Senator LAUTENBERG. Is that realistic, Dr. Larson? I mean, here we have more vehicles being registered all the time. I don't know what the sales figures are, but they are in the multimillion area—10 million, 12 million. How many million new vehicles get registered each year?

Mr. MCCORMICK. About 12 million, I think.

Senator LAUTENBERG. About 12 million. Is it realistic to say that we are trying and believe that we can cope with this growth? There is a law in physics that says you cannot occupy the same space with more than one thing and that is what we are trying to do.

CONGESTION PRICING

Let me ask you this question. Do you think that Americans ought to pay more for the use of highways, bridges, and tunnels in this country?

Dr. LARSON. That obviously is a very difficult question, Mr. Chairman. It could come down to the question of congestion pricing which, in fact, is identified in this policy as a matter for very careful observation and selective adoption.

Other countries have struggled with this. Perhaps Hong Kong and Singapore are the only places where they have really tried a very hard-ball congestion pricing approach.

I don't think the American public is ready for that. As for the question of whether the American public is willing to pay more for transportation, my judgment is that they are.

TRANSPORTATION TAXES

Senator LAUTENBERG. Would you recommend that they pay more for it? You study wear and tear, limits of facilities, et cetera. If you want to compare us to the Germanies of the world, then compare the gasoline and fuel taxes that we pay to what they pay in Germany, France, England, you name it, the other really highly developed countries. What about Tokyo? What is it there?

Dr. LARSON. $1 or $1.50 is the typical tax that you find in such countries.

Senator LAUTENBERG. It doesn't seem to help in Tokyo or in some of the other places, though.

Is this the kind of thing that realistically will have to be done in order to accommodate the serious building needs and research? You describe it as from invisible to approaching $100 million.

You are an academic as well as a manager by background. Is $100 million going to do it for us in this country? That is a kind of ephemeral objective that we are looking for at this point. Is that going to help us get there?

Dr. LARSON. Mr. Chairman, going back to the comparisons, I made them and I would have to say that it is a very dangerous game to compare one society to another, because all of the factors that are part of that society and that culture play on the decisions, including tax rates.

For our country, it is very clear that the whole concept and the whole position of the Government vis-a-vis taxation is very much on the table right now, and how we face up to the problem of transportation is somehow caught up in that larger issue.

We tried to make that point in our presentation, and I think that somehow the resolution will have to come out of this larger debate that is underway.

Senator LAUTENBERG. That is probably true. But I am just looking for opinions.

DEDICATED TRANSPORTATION TAXES

Do you believe in dedicated taxes for a specific purpose, like highways? We don't have to dance around the issue here.

Should people pay for use of the highways, just like they pay to a farebox to get to a train, a bus, an airplane, or otherwise?

Dr. LARSON. The user fee concept is one that I think has served us extraordinarily well in this country. It is one of the centerpieces of Mr. Skinner's policy. He believes that the user fee approach is a central feature for providing transportation because it avoids some of the competition with other Federal priorities.

Senator LAUTENBERG. So user fees are taxes as well, as are gasoline taxes and diesel taxes.

Dr. LARSON. I certainly am not an expert on definitions of user fees versus taxes, but I am inclined to believe that there are significant differences that can be identified. [Laughter.]

Senator LAUTENBERG. OK.

You do hold a Ph.D. that wasn't given as an honorary degree, but was earned. You are a very articulate man and you know it.

INTELLIGENT VEHICLE HIGHWAY SYSTEM [IVHS]

Let's talk about the Intelligent Highway/Vehicle Research Program. In the report accompanying the 1989 bill, this Committee called for a report on intelligent highway vehicles.

Where does that stand?

Dr. **Larson**. That report has been submitted. It was reviewed very extensively. As a matter of fact, the first report that I read as an official of this administration was, in fact, the IVHS report.

Senator **Lautenberg**. What was its original target date? Do you know?

Dr. **Larson**. I am not precise on the target date.

Senator **Lautenberg**. It is about 2 years late in coming.

Your colleague to your left has been here for a long time.

Sir, were you here when they kicked off the Highway Interstate Program? [Laughter.]

As a matter of fact, Eisenhower was the President of my college and signed my diploma then. But that was some time ago.

Do we know what it is that took so long on that?

Dr. **Larson**. I am not aware of all the factors since I came onto the scene some place into the process. But my sense is that it is a very thorough report. It was reviewed widely. We solicited and got comments from a very wide sector of interested parties. I will say again that the need to involve a wide cross section of American industry, academies, and other governments is absolutely paramount. We won't do this any other way, in my judgment, Senator.

IVHS RESEARCH

Senator **Lautenberg**. The fiscal 1991 budget requests $13 million for research. What should we expect from smart highway IVHS research? Do you think it is going to have an impact on congestion, safety, environmental quality of the Nation's metropolitan areas?

Dr. **Larson**. It will begin with a slow start, and that is why the amount is limited. We believe that that will give us the kind of ramping up that will allow us to move into this much larger number that I mentioned, and with many more participants.

Again, the $100 million we believe will be just the foundation on which a much larger effort will be launched.

Senator **Lautenberg**. Well, do you think $13 million for the coming year is enough to really give it a serious start?

Dr. **Larson**. Given the participation we have—for example, we launched a citywide, areawide program in Orlando that will provide very significant relief for congestion there. The ability to bypass congestion on I-4, for example, to go around it and be guided as you go around it, that program is underway.

We have significant participation by the city, by private industry, by associations, and with Federal Highway participation.

If that program works as well as we believe it will, that will become a model. And so, increasing funding will come and will be needed as we go into more communities with a demonstrated program.

Senator **Lautenberg**. It is certainly a limited funding start.

Dr. **Larson**. It is a limited funding start because the program is in its infancy. But it will escalate rapidly.

KEY ELEMENTS OF IVHS

Senator **Lautenberg**. What are the priorities of the research on smart highways or IVHS? What are the key elements?

Dr. **Larson**. The priorities go all the way across the four major components.

One of the components where we continue to do research is in the advance traffic management. How do you get signals to be real-time technology and make sure that we are using the kind of electronics technology to make simple things like signals work better. That is one component.

The second component is in the advanced driver information area. We are proposing funding for a very sophisticated simulator so we can do better human factors research. That is another component.

A third component is in the commercial vehicle arena. Mr. Landis could speak to that. But we have a significant program of research in the area of commercial vehicle safety that feeds into this because commercial vehicle enhancement is one component of the IVHS system.

Ultimately, we will be doing research and we are starting that on automation systems, where, in fact, you would bring the whole system closer to an automated state.

These four parts all have significant amounts of research underway, both funded by Federal Highways, funded by industry, and funded by State and local governments.

Senator **Lautenberg**. It sounds interesting and valuable. When I think of $13 million to get this program seriously underway, I just hope that you and I are going to be on this Earth when we really get into heavy duty research and accomplishment. I salute the program, but I really think that you and others responsible for the development of these programs are going to have to fight for more funding.

LONGER COMBINATION VEHICLES [LCV]

In a 1985 study entitled, "Feasibility of a Nationwide Network for Longer Combination Vehicles," FHWA concluded that performance and handling limitations of longer combination vehicles [LCV's], as well as their higher gross weights, could create significant safety problems, if LCV's are used more generally, such as under a great variety of road, environment, and traffic conditions.

Has anything happened in the last 5 years to lead the agency to change its conclusions on the safety problem associated with LCV's?

Dr. **Larson**. I will speak very briefly and then perhaps Mr. Landis can expand on this.

There has been a significant amount of observation and careful data gathering as these vehicles have been used more widely, and they have been used on an increasingly broader network. The Transportation Research Board has just completed and will be re-leasing in June a report that basically is supportive of the performance of these vehicles.

So I think that the observation that was made at that time was one that was cautious. Caution is still in order. But the record is a pretty positive one.

Perhaps Mr. Landis could expand on that.

Mr. **Landis**. Well, I could speak to it anecdotally. I don't have any figures in front of me.

The history out west, right now, is pretty clearly showing that the longer combination vehicles in that environment—and I think that is important to note, in that environment—are proving to be a satisfactory productivity improvement.

I think the study that you are talking about and the bottom line of that language is that you have to consider the increased size and increased weight with the geometrics and the pavement capabilities of those sections of highway. Again, what we have experience with now is out west.

LCV SAFETY

Senator **Lautenberg**. When you get into areas like New Jersey, New York, Connecticut, and Maryland—these areas—there are lots of bridges, there would be lots of axle weight concentrated at one place at a given time. Maybe you could argue about the distribution weight over the axle. But, on the other hand, if you get a bunch of these axles at the wrong place at the wrong time, with maneuverability, lots of curves, et cetera, and speed and congestion and all those factors, you have to consider that.

Mr. **Landis**. Mr. Chairman, the geometrics are really an important factor. I don't think anybody yet is now saying that longer combination vehicles are unsafe. I don't think that is proven yet, where the highway can accommodate those kinds of vehicles. I think that is what we have discovered in the last 5 years.

Senator **Lautenberg**. May we have a copy of that report, that June report.

Mr. **Landis**. Certainly. Yes.

[**Clerk's note**.—The June 1990 Transportation Research Board report entitled "Truck Weight Limits: Issues and Options," is on file with the subcommittee. Copies of this report may be obtained from the Transportation Research Board, National Research Council, Special Report 225.]

TRUCK SIZE AND WEIGHT

Senator **Lautenberg**. I have one last question.

DOT's National Transportation Study states:

> Maximum truck size and weight limits should be based on a full assessment of the public costs/benefits, and if limits are changed, highway user charges should be adjusted accordingly.

Does that mean that there will be no changes in truck size weight limits until such time as higher weight trucks are assessed their full highway cost responsibility as determined by Federal Highway's cost allocation studies?

Dr. LARSON. The statement is intended to make a clearer nexus between size and weight and fees. The language hopefully does just that.

The sequencing of events I guess is one to be worked out in final detail. But, clearly, we want that nexus to be part of the official policy of this Department.

Senator LAUTENBERG. I would hope so, because when we looked at wear and tear on our highways, something had gone awry. As a personal observation, it is amazing to me to see the wear and tear that comes so soon after roads are put in place. You have a little climatic variation and boy, the potholes are there promptly, and then there is the congestion in repairing them, et cetera. So this is an important question.

SUBMITTED QUESTIONS

I have other questions that I will submit for the record. I thank you for your patience and time which you have devoted to us this morning. We will be sending you other questions. Please see that they are responded to promptly. We wish you well and encourage you to stand up there and ask for the tools to get this job done.

We know that you can manage it, that your team can manage it. We would like to give you the tools, but it is awfully tough to shove a wrench into a carpenter's hands. So we are going to have to wait for you, to use the analogy of the tradesman.

Thank you very much.

Dr. LARSON. Thank you, Mr. Chairman.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

HIGHWAY TRUST FUND ACCOUNT

SENATOR LAUTENBERG: Mr. Larson, it is safe to assume that the Federal-aid highway program and the Highway Trust Fund will be extended beyond their current authorized period. At that time, the Highway Account is expected to have an uncommitted balance in excess of $6 billion. Therefore, it appears that the Highway Account can support a higher level of commitments during the next authorization period.

SENATOR LAUTENBERG: What alternatives for using these funds have been considered?

ANSWER: Consistent with Secretary Skinner's National Transportation Policy, we envision the introduction and enactment of highway authorization and highway financing legislation that will utilize the funds to which you are referring. So while it is true that an amount exists over and above what would be required under current law, these funds will be needed to meet future commitments for FY 1992 and beyond.

SENATOR LAUTENBERG: What is the minimum, safe balance that the Highway Account would need to maintain to guard against unforeseen disruptions to highway user tax income or inaccurate revenue projections?

ANSWER: The minimum prudent balance for the Highway Account is estimated to be in the range of $ 2 - 3 billion.

SENATOR LAUTENBERG: Mr. Larson, while recognizing that obligation ceilings have acted as a constraint, it appears that such ceilings themselves do not account for the $8.7 billion unobligated balance that FHWA estimated at the close of fiscal year 1989.

SENATOR LAUTENBERG: Why is there an unobligated balance of $8.7 billion?

ANSWER: $7.8 billion of the FY 1989 unobligated balance of funds available to the States is the result of obligation limitations enacted for FY 1989 or prior. The remainder of the FY 1989 unobligated balance (about $.950 billion) is attributable to programs exempt from the obligation limitation.

SENATOR LAUTENBERG: What has been the trend regarding unobligated Federal-aid Highway program funds?

ANSWER: Inasmuch as the amounts authorized almost always exceed the enacted limitations, the unobligated balances have tended upward. Specifically,since FY 1985, unobligated funds subject to the limitation and exempt funds have increased. The unobligated balance of funds available to States subject to the limitation increased from approximately $ 5.6 billion at the end of FY 1985 to $7.8 billion at the end of FY 1989, or an increase of about 39 percent. The unobligated balance of exempt program funds increased during the same period from approximately $.73 billion to approximately $.95 billion, or an increase of about 30 percent.

SENATOR LAUTENBERG: Is the obligation delay a particular problem with some programs? In some urban areas or States?

ANSWER: The obligation limitation does not cause any discernible problems with the individual Federal-aid highway programs. The unobligated balances in each State vary by program and this is a result of each State's priorities and ability to move projects forward. Obligation of funds move at differing rates by State and also by urbanized areas. In many urbanized areas project development takes longer due to environment considerations, concurrences by many local governments, varying State requirements as to matching funds, etc.

INTERSTATE SYSTEM

SENATOR LAUTENBERG: As of January 1, 1988, the Department estimated the remaining cost to complete the Interstate System at $16.3 billion, of which $14.8 billion is the federal share. This is an overall cost increase of $3.9 billion from the total cost in the 1987 Interstate Cost Estimate. What is the current estimate to complete the system? When will the Interstate System be completed? Is a second Interstate program needed to cope with the nation's escalating congestion problem?

ANSWER: The $16.3 billion amount is from the 1989 Interstate Cost Estimate and is still the latest available estimate of the remaining cost. The 1991 Interstate Cost Estimate is currently under preparation and will be forwarded to Congress by January 1991.

Based on schedules prepared by the States in conjunction with the 1989 Interstate Cost Estimate, the Interstate System should be completed in the late 1990's.

Interstate Construction

SENATOR LAUTENBERG: Mr. Larson, as of January 1, 1988, the Department estimated the remaining cost to complete the Interstate System at $16.3 billion, of which $14.8 billion is the Federal share. This is an overall cost increase of $3.9 billion from the total cost in the 1987 Interstate Cost Estimate.

SENATOR LAUTENBERG: Is a second Interstate program needed to cope with the nation's escalating congestion problem?

ANSWER: No. Added capacity will be required to accommodate the doubling in highway travel that is expected by the year 2020, but we do not envision the need for a second Interstate System to meet that requirement. We expect that additional capacity will come on line in the form of improved systems management and lane additions to existing facilities, supplemented by selected new high design type facilities where siting problems can be resolved.

The Interstate System in and around urban areas, the locations where congestion is most pronounced, was developed to provide national system continuity for interstate and interregional travel. We believe that programs relating to Interstate System performance should emphasize that goal. Congestion relief should be accommodated only to the extent that congestion impedes the Interstate System's ability to support interstate and interregional travel.

INTERSTATE DEFICIENCIES

SENATOR LAUTENBERG: FHWA reports that nationally, in 1987, 11.5 percent of all rural and urban Interstate roads were deficient. Actual differences in rural Interstate deficiencies among States range from 0 to 42 percent, according to FHWA. Likewise, the range of pavement conditions on urban Interstates varies considerably by State. The national average is 11.1 percent, but States' pavement deficiencies range from 0 to almost 46 percent.

SENATOR LAUTENBERG: How reliable is this pavement rating by State?

ANSWER: The States have been reporting highway condition and performance data, including pavement condition, for more than 10 years under the Highway Performance Monitoring System. During this time, the consistency and accuracy of pavement condition data has improved significantly. Pavement condition as reported is still somewhat subjective, and so there is some variation among the States.

Beginning with 1989 data, to be reported in 1990, FHWA is requesting that roughness be reported for all paved rural arterials and urban freeways. This includes all Interstate highways. Roughness is an objective measurement, using calibrated equipment, and will provide even greater consistency of measurement, which should lead to more uniform pavement ratings.

SENATOR LAUTENBERG: How might the formula be changed to address the diverse State needs and the States' diverse abilities to raise additional resources to address this problem?

ANSWER: Apportionment formulas are typically based on objective measures that are not subject to interpretation. Therefore, objective factors that are surrogates for system mileage and usage are preferable to subjective measurements such as needs assessments or ability to pay.

SENATOR LAUTENBERG: To what extent is the present Federal Interstate funding formula aligned with diverse State needs?

ANSWER: Lane miles and travel are logical surrogates for direct measures of the amount of funding likely to be needed to maintain highways in acceptable condition. All lane miles will require rehabilitation in time, and the amount of traffic is an indicator of the extent of use of these miles.

SENATOR LAUTENBERG: Since much of the Interstate has or will be approaching the end of its 20-year design life, what is the future expectation for the amount of deficient Interstate pavement? To what extent will the current Interstate preservation funding levels enable us to cope with these deficiencies?

ANSWER: About 2000 miles per year of Interstate pavement are expected to require pavement rehabilitation of some type to maintain acceptable conditions. We believe that current Interstate 4R funding levels are adequate to address these pavement needs.

SENATOR LAUTENBERG: Should national standards of measurement be imposed so that better comparisons can be made between States?

ANSWER: The requirement to report pavement roughness is moving toward the provision of more comparability among States. However, somewhat subjective measurements are still required to estimate real pavement conditions, as roughness does not capture all pavement deficiencies. Equipment is still experimental but may eventually be able to record pavement condition with sufficient accuracy and objectivity to provide the desired degree of national consistency.

INTERSTATE MAINTENANCE

SENATOR LAUTENBERG: The Interstate 4R (resurfacing, restoration, rehabilitation, and reconstruction) program is designed to provide funds on a 90 percent Federal, 10 percent State matching basis. The program is currently funded at $2.8 billion annually. No Federal funds, however, are available for Interstate maintenance. Some transportation officials have questioned the wisdom of this decision -- no funds for maintenance, but 90 percent Federal funding once the Interstate segment reaches a certain degree of deterioration. Are States that contribute more to Interstate maintenance being indirectly penalized through the existing Federal program structure?

ANSWER: The existing Federal program structure doesn't indirectly penalize States that contribute more to Interstate maintenance. Interstate 4R funds are distributed to States on the basis of their Interstate lane-miles and vehicle miles of travel. As a consequence, the condition of a State's Interstate highways doesn't affect the amount of Interstate 4R funds it receives. States which keep up maintenance, in fact, have more program flexibility. They may use their Interstate 4R funds for anticipated and scheduled capital improvements on the Interstate system or possibly the Primary system, rather than on costly and untimely reconstruction projects resulting from limited maintenance.

SENATOR LAUTENBERG: What would be the advantages and disadvantages of Federal maintenance incentives?

ANSWER: An incentive, such as an increased Federal share for certain types of construction activities, could serve to advance these activities, particularly in States where Federal funding represents a major portion of the State's overall highway program. However, an increased Federal share may ultimately result in less overall funds being directed to the highway program unless States remain committed to directing resources not needed for Federal matching purposes to other highway needs.

SENATOR LAUTENBERG: Should States be given more flexibility in how they use their Interstate 4R funds?

ANSWER: We feel the States at present have ample flexibility on the types of activities eligible for Interstate 4R funds. These funds can be used for most upkeep activities except for routine maintenance work, such as snow plowing, trash pickup, pot hole patching, etc. Considering the limited amount of

Federal funding available, we see little advantage in extending these resources to additional activities.

SENATOR LAUTENBERG: Will this be addressed in the new authorization bill?

ANSWER: We are still looking into our various options for structuring the reauthorized highway program. Use of a higher Federal match for certain activities, such as resurfacing, restoration, and rehabilitation, on highways where there is a well-defined Federal interest is being given serious consideration.

SENATOR LAUTENBERG: Since maintenance could conceivably involve as many as 100 different activities, how does FHWA draw the line between what is considered an eligible preservation (Interstate 4R) activity versus an ineligible maintenance activity.

ANSWER: Many of the activities classified as maintenance by the States are classified on a traditional rather than a Federal-aid eligibility basis. Some examples of this are pavement resurfacing, bridge repainting, replacement of guardrail or other safety hardware, grinding and undersealing to restore pavement rideability and stability, etc. Under specific conditions, these activities could be eligible for Federal-aid funding should the State elect to pursue the work as a Federally aided project. However, because of the limited amount of Federal funding available, some States elect to use other than Federal-aid funds for these activities. Generally, those activities which restore structural or functional integrity, substantially extend the useful life of various elements of the highway system and enhance safety are considered eligible for Federal funding. On the other hand, activities which are primarily aimed at preserving the existing elements in an operable condition are viewed as routine maintenance and are not considered eligible.

TRAFFIC MANAGEMENT

Congestion/Mobility

SENATOR LAUTENBERG: The mobility of Americans is being jeopardized as traffic congestion levels continue to escalate at an alarming rate. Between 1983 and 1987 alone, the percentage of rush hour travel under congested conditions on urban Interstates has increased from 54 percent to 65 percent. FHWA forecasters have predicted that, if no mitigating actions are taken, by the year 2005, the nation will spend 3.9 billion hours annually sitting in gridlocked traffic. What are the key actions currently being taken to relieve congestion?

ANSWER: FHWA has developed and is implementing a plan of action against congestion containing six basic objectives:

1. Define present and future congestion problems, outline a program to promote a more universal recognition of the congestion problem

and identify the responsibilities of transportation suppliers and consumers.

2. Develop a program of improved transportation planning to enhance system performance and promote better land use/transportation relationships.
3. Focus on implementing current and emerging transportation system technologies. Through the IVHS program, for example, strategies are proposed to better manage and operate the highway and public transportation systems while conducting aggressive research and development on future systems that can actually solve major problem areas.
4. Enhance the technical expertise of the transportation professionals dealing with congestion -- a problem particularly acute at the State and local levels.
5. Develop a program for research and development of future systems and a program to operationally evaluate these systems.
6. Provide the energy necessary to make it happen -- the legislative initiatives that are required to advance the fight against urban and suburban congestion.

This action plan is consistent with the National Transportation Policy and specifically with the major themes to (a) Maintain and Expand the Nation's Transportation System, (b) Keep the Transportation Industry Strong and Competitive, and (c) Advance U.S. Transportation and Technology.

SENATOR LAUTENBERG: What additional action needs to be taken at the federal level to better respond to this problem?

ANSWER: If America is to meet the transportation needs of society for the 21st century, the Federal government must be committed to working with State, local, private, and academic organizations to preserve the integrity and efficiency of our highway and public transportation systems. Although congestion must be the focus, efforts must also address the safety, environmental quality, and rural transportation issues that affect the integrity of these systems. Therefore, a broad cooperative and coordinated approach must be taken to effectively combat congestion.

SENATOR LAUTENBERG: To what extent is new highway construction the answer to congestion?

ANSWER: We believe that, in order to adequately address congestion, a variety of strategies must be endorsed and implemented, one of which is providing new capacity. The traditional Federal-aid Highway Program is flexible and can be utilized for a variety of mobility needs in congestion regions. Funds can be used for (1) supply side actions such as new construction, freeway management strategies, and arterial computerized signal systems, (2) demand side actions such as vanpool/carpool programs, HOV facilities, and parking management, (3) public-private partnerships such as transportation management associations, and (4) advanced technology actions such as those under IVHS, which places a focus on implementing current and emerging technologies.

SENATOR LAUTENBERG: GAO recently completed two reports for this subcommittee on the traffic congestion problem. While the GAO did find that traffic congestion was getting worse in many areas across the United States, and could grow by as much as 300 percent between now and the year 2005, they concluded that DOT/FHWA efforts to address congestion were diffuse, and consequently, that a more coordinated strategy for fighting congestion needs to be developed by the Department. How is such a strategy or plan represented in the 1991 budget or in the National Transportation Plan?

ANSWER: For 1991, a primary element of FHWA's strategy is contained in the IVHS Program, under the 1991 budget item, Science and Technology. This initiative would not require major technical breakthroughs, but would involve the completion of research projects and operational tests to accelerate implementing existing technologies, thereby making the exceptional transportation management practices routine in this country. IVHS initiatives would be advanced through cycles of research and development, operational tests, and evaluations until a given technology is operational. It would then be marketed and transferred to the user community. FY 1991 represents the first major funding of IVHS and is important in providing a headstart or transition to the long term effort to be included in the highway reauthorization.

To ensure preservation and effective use of highway and public transportation facilities (page 49 of the National Transportation Policy), FHWA and UMTA are currently considering comprehensive legislation, through the reauthorization process, that would address congestion in a more coordinated fashion.

SENATOR LAUTENBERG: Do you believe public transit plays an important role in alleviating traffic congestion? What steps are you taking to include public transit in any congestion reduction approach being taken by the department?

ANSWER: Yes. It is very important that we work with the Urban Mass Transportation Administration (UMTA) in attracting passengers to transit. FHWA will continue to work jointly with UMTA as well as State and local officials in addressing congestion strategies such as transitways and other HOV facilities, for example, to emphasize movement of people, not just vehicles. Also consistent with the NTP initiative to make better use of existing assets, the FHWA, in cooperation with UMTA, will encourage innovative demand management and operations approaches with strong private sector participation.

SENATOR LAUTENBERG: Please detail specific steps that FHWA in now taking and those you plan to take with FY 1991 funds to promote the use and advancement of traffic-responsive urban traffic control systems.

ANSWER: Among the steps that FHWA is or will be taking are the following: First, there will be a FY 1991 effort to conduct several case studies for establishing traffic control system quality assurance programs. The FHWA initiated this effort in FY 1990 in order to promote application of today's exceptional system technology and to provide technical assistance to those interested. Second, there will be a FY 1991 effort to conduct model traffic control systems planning studies in several locations. These studies are intended to produce a plan for implementing state-of-the-art traffic control systems, with the goal that every mid-to-large size urban area will eventually have one. Third, we will be sponsoring a research and development effort to look into new adaptive traffic control strategies. Of course, Federal-aid funds remain available for State and cities to use to plan, design, and implement state-of-the-art traffic control systems.

SENATOR LAUTENBERG: How could regulatory and economic incentives also help relieve congestion in this area?

ANSWER: We believe the concept of incentives can do a great deal to aid the fight against congestion. As part of the reauthorization, FHWA is considering incentives such as higher federal-aid share for congestion management projects and eligibility of start-up costs for traffic management and control activities.

SENATOR LAUTENBERG: Does FHWA view the encouragement of these technologies as primarily a Federal, state, local, or combined effort responsibility?

ANSWER: Combined effort responsibility. Research, development, testing and deployment of technologies for IVHS, for example, will require the combined efforts of numerous public and private sector partnerships. In addition, IVHS technology will be applied through extensive technical support and partnerships with universities, States, local agencies, and other Federal agencies.

SENATOR LAUTENBERG: How do existing and planned FHWA policies and programs encourage or facilitate the interjurisdictional coordination necessary for the effective use of such systems?

ANSWER: A major component of FHWA's current and planned policies and programs in addressing congestion is to foster interjurisdictional coordination. A primary element of these efforts is the development and coordination of metropolitan projects (including traffic control systems) through the area's metropolitan planning organization. The traditional Federal-aid Highway Program continues to encourage more effective use of existing facilities through improved traffic control systems, including systems that cross jurisdictional boundaries, that communicate with each other, and are coordinated.

Incident Management

SENATOR LAUTENBERG: Studies by the FHWA and other private groups have noted that as much as two thirds of all traffic delays are attributable to freeway incidents -- accidents, disabled vehicles, truck load spills. Although the benefits which could be achieved from incident management systems designed to remove such incidents more quickly from the roadway are great, few efforts have been made to promote development of such systems. What federal efforts have been made to quantify the delays associated with incidents? What results have been proven?

ANSWER: There have been several efforts made to promote development of incident management programs, including providing direct technical assistance to State and local officials by FHWA staff, conducting training courses, clarification of federal fund eligibility, and sponsoring State executive incident management field trips to view operating programs. In addition, FHWA has sponsored several research studies, through the States, that attempt to quantify delay associated with incidents. The results of a 1978 study, "Alternative Surveillance Concepts and Methods for Freeway Incident Management", have been used by FHWA and the Texas Transportation Institute to quantify incident delay on a national basis, and by many other agencies to quantify incident delay in specific urban areas on a macroscopic basis. As more and more areas implement incident management programs, there is a need for a better data base. FHWA will initiate a research study in FY 1991 to update and expand this data base. This research study will be able to utilize a quantity and quality of data that has never been available in the past, taking advantage of incident data now being collected by a number of States.

SENATOR LAUTENBERG: What efforts have been made at the federal level to quantify the costs of incident related congestion (productivity, environment, clean-up)?

ANSWER: A 1987 FHWA staff study, "Urban Freeway Congestion: Quantification of the Problem and Effectiveness of Potential Solutions" and an update in 1989 have probably done more to draw attention to the impact of incidents on urban freeways than any other single reference. The publication of these papers in the "ITE Journal", the professional magazine of the Institute of Transportation Engineers, resulted in the largest number of reprint requests in the history of ITE. Results of the studies have been cited in every major newspaper and national magazine in the country. A FY 1991 research study, sponsored by FHWA, will provide more quantitative data on specific incident types and frequencies.

In addition, FHWA has formed a National Urban Congestion Monitoring Working Group which has two basic purposes:

1. To recommend to the FHWA the collection of practical, meaningful national congestion information that is reasonable to expect urbanized area authorities to collect and report to FHWA.
2. To identify and define specific data elements, measurements and indices to be reported to FHWA by urbanized area authorities on an annual basis to measure congestion, monitor changes in congestion, and to compare the severity of congestion among the urbanized areas of the Nation. This includes the identification of the highway functional systems to be measured, units of measurement, etc.

SENATOR LAUTENBERG: What role does FHWA foresee for the federal government in promoting, funding, or planning programs to reduce delays associated with incidents? What attempts have been made and are planned to identify costs involved with developing such systems? What efforts have been made or are planned to weigh such costs against anticipated benefits?

ANSWER: FHWA has underway and/or proposed a large number of efforts to emphasize the importance and benefits of incident management. An extensive range of technical assistance projects are under development to supplement existing efforts. These include the completion this year of an incident management handbook and videotape plus a Demonstration Project to assist agencies in the development of cost effective incident management programs. New contracts have just been awarded for the development of an expert system and a video disk training system. A FY 1991 research project will provide additional data to help qualify and quantify incident frequencies and incident management benefits. Several operational tests, with funding support from FHWA, are now underway and planned (FY 1991) which will help quantify costs and benefits for various incident management strategies. In addition, there is no question that federal funds' eligibility strongly influences priorities established by the States. On this basis, FHWA has increased its efforts to identify and expand federal funding eligibility and to recommend increased incentives in the reauthorization proposal where possible.

SENATOR LAUTENBERG: What other measures, besides incident management, does FHWA believe might offer relief to incident-related traffic congestion (night deliveries, truck freeway ban during peak hours)?

ANSWER: Truck involved and other major incidents draw media and political attention, but in fact make up only two to five percent of the total number of incidents in urban areas. Many truck incidents occur in the off-peak periods when speeds are higher and lane changes more frequent. Most truckers who have the option avoid urban freeways during peak periods for obvious reasons. Truck restrictions and bans can have an adverse economic impact on trucking companies and have not proven to be necessarily effective in reducing truck incidents. A recently awarded FHWA research project will investigate effective countermeasures to reduce truck accidents on urban freeways.

One measure that has not received enough attention as an incident management strategy, but one that has potential benefit, is improved driver training/education, particularily for freeway driving. Proper merging, exiting, lane changing, and following techniques would reduce freeway accidents significantly, especially under congested conditions. Various studies show that 70 to 80 percent of urban freeway incidents are minor accidents and minor mechanical problems, including running out of gas and flat tires. Nearly all of these are preventable. When minor accidents and breakdowns do occur, drivers are preoccupied and do not recognize the danger of stopping on a freeway. Over 1,000 pedestrian fatalities each year occur on freeways. A large number of these "pedestrians" are dismounted motorists. A number of States have initiated programs to better educate motorists of the "dangers" of stopping on freeways. More needs to be done.

SENATOR LAUTENBERG: FHWA has in at least two instances -- (1) the Washington Beltway Task Force, and (2) the Region 10 Accident Prevention meetings -- used groups of experts from FHWA, industry and state governments to discuss commercial vehicle safety problems in specific locations. We understand that both of these efforts were successful. Where else has FHWA used similar approaches?

ANSWER: Another example involved a series of Highway Engineering and Traffic Law Enforcement Conferences, cosponsored by the FHWA, NHTSA, IACP, and AASHTO. These conferences focused on problems of mutual concern and sought a commitment by both engineering and enforcement to conduct similar conferences at the State level.

In addition, FHWA endorses the Traffic Management Team approach, a mechanism through which the necessary people and resources are assembled in a cooperative effort to communicate and coordinate activities, to manage a transportation system and deal with congestion. This concept, which has been practised in several urban areas around the country, represents a fine example of cooperation and coordination by various disciplines toward a common goal.

SENATOR LAUTENBERG: Should this strategy be used elsewhere by FHWA?

ANSWER: To the extent possible, FHWA has supported the strategy of using groups of experts from FHWA, industry and state governments to help solve various problems. There are coordinating groups, such as traffic management teams, established in a number of major cities which serve well the idea of cooperation and coordination in the areas of engineering, enforcement, and traffic management. Because the problems of traffic congestion requires a multidisciplinary approach, FHWA endorses these efforts.

SENATOR LAUTENBERG: How could such meetings be useful in addressing traffic congestion and commercial vehicle problems?

ANSWER: Because traffic congestion involves a mix of vehicle types, including commercial vehicles, cooperative efforts are essential in addressing solutions. In incident management, for example, the associated activities of enforcement, clearance, and traffic management are all interrelated and important elements to address. Therefore, efforts to coordinate these activities through structured teams and/or conferences to express the different views, would be useful.

INTELLIGENT HIGHWAY/VEHICLE RESEARCH

SENATOR LAUTENBERG: Is the delay in getting out this report indicative of bureaucratic obstacles to moving quickly in this area?

ANSWER: No. At the time the report was being prepared, agency staff were also involved in many activities leading toward development of a consensus national Intelligent Vehicle Highway Systems (IVHS) program, working cooperatively with their peers in industry and academia. We feel that the program is being advanced at the appropriate speed.

SENATOR LAUTENBERG: The fiscal year 1991 budget requests $13 million for research in this area. If you had additional resources, where would you devote them?

ANSWER: Of the $13 million requested, $9 million is for research and $4 million is for operational tests, i.e., test and evaluation of IVHS systems or components under live traffic conditions. Additional resources would be used to accelerate work already planned, for example, research on the systems architecture and communications standards needed for IVHS systems, research on human factors issues, and extension of operational tests planned in the advanced driver information and commercial vehicle operation areas.

SENATOR LAUTENBERG: What do you mean to imply when you identify the 1991 request for IVHS research as a transition year? What should we expect to see from FHWA for IVHS research next year (FY 1992)?

ANSWER: The word "transition" means that while FHWA will slightly increase its research and technology program in this area to $13 million in FY 1991, it will also use 1991 to prepare to effectively administer a larger IVHS program beginning in FY 1992. We do not yet know what we will propose for FY 1992, other than it is expected to be larger than $13 million.

SENATOR LAUTENBERG: Do you think the department is in a position to handle a larger scale R&D effort for IVHS? Has sufficient planning been done?

ANSWER: This has certainly been a concern of ours. Planning is already well underway within the agency in regard to organizational structure, alternative ways of effectively spending the money, and staffing needs. The FHWA will take advantage of all available academic, private, and public sector resources as much as possible. We are confident we can effectively manage a larger program, given sufficient resources.

SENATOR LAUTENBERG: What do you see as the major obstacles to a successful federal initiative in IVHS and what steps can be taken to overcome these obstacles?

ANSWER: We see the biggest obstacles being related to the ability of States and cities to deploy IVHS technology. The first major obstacle is overcoming institutional problems. The problems presented by coordinating transportation services across many agencies and political jurisdictions will present as much of a challenge as solving the technical issues. Different techniques will have to be tried, for example, use of management teams representing all involved agencies operating from a single management center, franchising operation of the system, or creating a system operating authority. The second major obstacle is the need for good people. This is an especially critical issue. The best technology in the world will not be effectively used if there are not enough qualified individuals who know how to design, build and, apply it. Fellowship, scholarship, co-op, and professional exchange programs must be sponsored, and appropriate curricula and education materials developed.

SENATOR LAUTENBERG: What are the priorities of FHWA's proposed smart highway or "IVHS" research?

ANSWER: At this point, our priorities are to develop the highway system surveillance and communications infrastructure and transportation management strategies that will take advantage of the "smart vehicles" being developed by industry. This will coordinate FHWA research and development with that of private industry so that the technologies developed for the highway advance at the same rate as those for the vehicle.

SENATOR LAUTENBERG: Does the proposed 1991 IVHS program give sufficient attention to long-term research issues such as the promise and problems with highway automation?

ANSWER: The initial stages of automated vehicle control systems will involve development of autonomous systems, i.e., completely contained within the vehicle. Much of the early activity, therefore, will take place in the private sector. The auto manufacturers continue to work on things like hazard warning systems, and automated speed and position control aids. These systems will be the basis for the totally automated systems of tomorrow. The principal long term research program in this area is California's Program on Advanced Technology for the Highway. This program has at least 20 sponsors from private industry, academia, and State and Federal governments interested in solving the technical and institutional issues of highway automation. We have supported the PATH program, and we will continue to support it in FY 1991. We fully expect the resources we commit to this area to grow substantially in the future.

SENATOR LAUTENBERG: Does the department still consider techniques aimed at lowering freeway demand through public transit, ridesharing, etc. to be important aspects to efficient highway management?

ANSWER: Absolutely. The department recognizes the need for a balanced program to address congestion problems, incorporating elements of capacity increases, better flow management and demand management. IVHS will provide tools to help manage the demands on the highway system. For example, through greatly improved motorist information services, travelers will be able to choose among transit, ridesharing, or private vehicle, will be able to choose a more convenient time to travel, may change the route for the trip to use less congested corridors, etc. The net result should be less demand on already congested facilities.

SENATOR LAUTENBERG: Why does the proposed 1991 IVHS program not include any component that seeks to incorporate transit usage as well as car and vanpooling into an overall IVHS system?

ANSWER: Although our budget submittal did not specifically mention transit or car- or vanpooling, these are addressed in our FY 1991 program. Interfaces with transit vehicles will be considered in the design of communications interfaces and determination of information needs. In cooperation with UMTA, a study will be sponsored under which strategies will be developed and evaluated that will be designed to use the information available from advanced management and information systems to better manage demand during periods of incidents, special events or air quality alerts. The scope will include transit vehicle monitoring, high occupancy vehicle lane management, pre-trip information for passengers, ridesharing brokerage, and paratransit operations.

SENATOR LAUTENBERG: What consideration have you given to developing smart highways that can address air quality problems, and why is the issue not being addressed in any of the smart highway research this year?

ANSWER: The issue of how we can use advanced management and information systems to manage demand and improve air quality will be addressed in the study mentioned in the answer to the previous question. Protecting the environment is one of the six themes of the Secretary's transportation policy. The FHWA has recently issued a new environmental policy statement. The importance of air quality is also recognized by all involved in the planning of a national IVHS program. It will be one of the measures used to evaluate the effectiveness of new IVHS systems. Any improvement made to flow efficiency will reduce vehicle emissions, as, of course, will reductions in vehicle demand. We believe that IVHS systems will make significant improvements in flow efficiency and help manage demand, therefore, we also expect to be able to reduce vehicle emissions.

SENATOR LAUTENBERG: With IVHS efforts going on worldwide, why is it that your research program makes no mention of dealing with international cooperation, and/or international competition? Do you plan to address either of these in the future?

ANSWER: The issue of international competition has been one of the key motivating factors in the development of an IVHS program in the United States. Our research program is aimed at stimulating the development of transportation applications of advanced electronic and software technology to provide better transportation for the public, and at the same time, foster development of new products for the private sector that they can sell in international markets. We don't believe that the competitiveness issue precludes international cooperation. It is certainly in everyone's best interest to learn from each other to avoid needless "reinventing of the wheel." Staff from FHWA have been involved in international IVHS activities through committees of the Organization for Economic Cooperation and Development. There will assuredly be international cooperation in the development of standards. We also expect to work closely with our friends in Canada. Canadians have been involved in the discussions leading to development of a recommended national IVHS program, and, in fact, we are already cooperating with them on a major commercial vehicle IVHS project.

SENATOR LAUTENBERG: Could you please describe what role FHWA intends to play in evaluating the various demonstrations that have been proposed in this year's IVHS budget?

ANSWER: The purpose of doing these operational tests is to evaluate the technologies and systems being tested. The evaluations will have many facets, including cost effectiveness, benefit to individuals, reliability and public acceptability. The evaluations are extremely important, since decisions on major investments of public and private funds for deployment will be made in large part on what they show.

SENATOR LAUTENBERG: How do you intend to communicate the results of your proposed FY 1991 R&D efforts? Do you intend to apprise the subcommittee of gains or setbacks that occur in your pursuing a more aggressive smart highway system in the United States?

ANSWER: It will be necessary to establish a national clearinghouse of technical information on the results of IVHS research, development and testing, and to establish marketing mechanisms so that the public is informed of progress. The

Highway Users Federation has proposed the establishment of an independent national organization to be governed by a Steering Committee consisting of representatives from government and industry. We will look to this body, and to the States and private sector, to help communicate the results of our work. We certainly intend to keep the subcommittee apprised of our progress.

SENATOR LAUTENBERG: Do you see evaluation as an important aspect of any expanded "IVHS" research program that could be considered during the highway trust fund reauthorization? And who should be primarily responsible for executing such an evaluation component?

ANSWER: An operational testing program is considered a major part of our IVHS program. We see the evaluations conducted under the operational testing program to be the transition between research and development and deployment of IVHS technologies, providing verification of the merits of the technology in order to accelerate deployment. We expect that we will spend more on operational tests than we do on research and development. The program will be conducted cooperatively, including financial participation, by the Federal, State and local governments and the private sector.

SENATOR LAUTENBERG: On page 39 of the budget request, FHWA is seeking $500,000 for research on Intelligent Vehicle/Highway Control systems. What are the advantages and disadvantages of postponing this research until advances in IVHS technology pertaining to advanced traffic management and driver information systems are realized?

ANSWER: The only advantage to postponing this research would be to reduce risk but this would be at the expense of progress. The kinds of systems mentioned on page 39 are already being developed in the private sector, and a number of key issues that relate to public acceptance and safety need to be examined right away. The low level of funding proposed relative to other IVHS areas reflects the fact that we are taking advantage of the opportunity to participate in California's PATH program, thereby leveraging Federal funding participation.

SENATOR LAUTENBERG: What is the expected time horizon for commercialization of each of the technologies describe on page 37?

ANSWER: There is no way of predicting exactly when certain technologies will be commercialized. We expect that many new hardware and software components will be developed as a result of work on each of the systems described on page 37, and that these will be commercialized at different points in time. As a general rule, we expect that commercialization will occur first for many technologies in the area of commercial vehicle operations, perhaps in the next five years, and then in the areas of advanced traffic management systems and advanced driver information systems over the course of the next ten years. Commercialization of advanced vehicle control technologies will generally lag, except for autonomous systems, e.g., obstacle detection systems, that the manufacturers can add to their vehicles.

SENATOR LAUTENBERG: What are the non-technical constraints (regulatory, legal, and institutional) affecting the commercialization of each of the IVHS?

ANSWER: Institutional and staffing problems were addressed in our answer to your previous question about what we saw as the major obstacles. Another important issue that needs to be addressed, particularly as it relates to advanced vehicle control technologies, is the issue of liability. Accidents will inevitably occur, and while we must do all we can to avoid them and fairly treat anyone who suffers as a result, we do not believe the pace of research and development should be hindered by fear of large liability settlement costs.

SENATOR LAUTENBERG: When and how are each of these likely to be overcome?

ANSWER: Resolution of these issues will, we believe, evolve over time. We cannot pinpoint a date when they will be "solved." We suggested some possible ways of addressing the institutional and people problems in our earlier response. Resolution of the liability issue may well require new legislation to specifically limit liability risk of those involved in developing and deploying IVHS technology.

SENATOR LAUTENBERG: How does your FY 1991 budget address each of these constraints?

ANSWER: A Federal research, development or operational testing effort is not necessarily the best way to address these constraints. These issues are being discussed and addressed at many meetings and conferences involving representatives from Federal, State and local governments, the private sector and the academic community. If FHWA can help resolve some of these issues through an administrative contract effort, we would certainly plan to do so. We are addressing the people problem in FY-1991 through establishment of Centers of Excellence at several universities around the country, and through continuation of our technical assistance and training program in the area of traffic management systems.

STATES' INPUT TO FHWA'S RESEARCH PLANNING

SENATOR LAUTENBERG: What input does FHWA get from State highway and safety officials in shaping FHWA's research agenda?

ANSWER: There are four principal channels through which State highway and safety needs are received by the FHWA: through the American Association of State Highway and Transportation Officials (AASHTO) Standing Committee on Research (SCOR) and the Research Advisory Council (RAC), through problem statements solicited by the National Cooperative Highway Research Program (NCHRP), through the Transportation Research Board (TRB) committee structure, and through FHWA headquarters staff contacts with State and Federal field offices.

The FHWA Research and Technology (R&T) effort is responsive to information received through participation in the SCOR and RAC meetings, where officials from various parts of the country are represented. Participating in the NCHRP annual solicitation and review of problem statements provides the FHWA an indication of the research areas the States and other contributors deem important. The TRB committee structure provides one-on-one contact for FHWA technical specialists with their counterparts in the public and private sectors. As FHWA staff members travel to field offices to discuss ongoing research activity, the opportunity is typically used to discuss needs for future research either directly with State officials, or with FHWA field staff members familiar with State problems. FHWA also receives input from public and private agencies through specific contracts set up to achieve this purpose. An example of this is the Strategic Transportation Research Study (STRS) for Highway Safety conducted by the Transportation Research Board. This study was directed by a steering committee of 20 members, including representation from State transportation departments, the automotive industry, safety organizations, and universities and research companies.

SENATOR LAUTENBERG: What has been the approximate success rate of FHWA in getting new technologies into the marketplace?

ANSWER: Because of the varying ways and degrees of measuring "success" for new technologies, it is difficult to place a figure on the rate of success. FHWA has been almost 100 percent successful in getting new technologies, initially judged to be satisfactory, implemented on a trial basis, through experimental projects and demonstration installations. Although not all of these initial installations continue in use, the technology is utilized as input into the States' future selections of applicable equipment or practices.

SENATOR LAUTENBERG: Which technologically successful research and development projects funded by FHWA during the last ten years have not resulted in advances or improved technologies or processes that are now used by State governments?

ANSWER: There have been occasional technological developments by FHWA which failed to attract attention in the market place. The Self-Powered Vehicle Detector is a product which is technologically sound, fully functional and has many desirable attributes over conventionally wire connected traffic detectors. Manufacturers have been slow to produce it because they perceive the market for the detector as very small. The FHWA is working with a potential commercial producer to further develop this technology.

Cathodic Protection for concrete structures has been developed to prevent corrosion of steel reinforcing. The technique has been shown to be a cost/effective way to resist the effects of corrosive salts used as a deicing agent and to extend the service life of bridge components. It has not been widely used because the installations require periodic maintenance to remain fully operational.

Sulflex paving material was developed as a result of the past energy crisis, as an alternative to petroleum products. It is not being used currently because the current low cost of petroleum makes the more expensive Sulflex non-competitive.

SENATOR LAUTENBERG: Why weren't these advances used commercially or by State governments?

ANSWER: There are several reasons why States resist using new and successful technology:

1. The incremental increase in efficiency with the new technology is sometimes perceived to be not worth the cost of converting to a new method.

2. There is a lack of information on the relationship of the new technology and safety, therefore making it impossible to do a benefit/cost analysis.

3. There is sometimes a lack of confidence in the effect of the new technology, because it is unfamiliar.

4. The new technology is complex and requires some learning to utilize.

5. The locations where the new technology can be utilized is limited and standard methods can be made to treat these locations.

Although these reactions to new technology tend to slow its acceptability, FHWA is working to overcome them with more sophisticated marketing techniques focusing on specific items with the highest payoff potential.

SENATOR LAUTENBERG: How can FHWA increase the input of State officials into all of the research projects that FHWA funds?

ANSWER: FHWA has been working with AASHTO and the TRB to develop a communication and coordination mechanism to increase the input by State representatives and others in formulating the FHWA Research and Technology (R&T) program; in prioritizing the proposed activities; and in tailoring the research findings for realistic application. A three level approach is being considered which would expand upon the R&T policy direction, program selection, and technology development aspects, currently existing within the FHWA organization.

SENATOR LAUTENBERG: Should there be greater involvement by State officials to ensure adequate input from the primary user of your research and development projects?

ANSWER: Yes, with the expanded research and technology program proposed, greater involvement of all potential users of the new highway technology is desirable, including the States, cities, local jurisdictions, and private industry. Added involvement by outside interest groups will aid FHWA in keeping the Research and Technology Program focused on research needs of national interest, in prioritizing proposed activities, and in delivering the new highway technology to potential users. States are expected to play a much bigger role in each of these areas.

VERIFICATION OF OUT-OF-SERVICE CITATIONS

SENATOR LAUTENBERG: The Motor Carrier Safety Assistance Program (MCSAP), resulted in FY 1989 in almost 1.3 million driver and vehicle inspections, with about 92,000 drivers and 474,000 unsafe vehicles removed from service due to serious violations of safety regulations. This program currently relies heavily upon industry to self-certify that critical defects are corrected. What is the FWHA doing to assure that vehicles and drivers placed out of service remain so until the violations are corrected?

ANSWER: During compliance reviews, FHWA reviews vehicle maintenance records to ensure that regulations are being followed. Information on individual vehicle inspections is reviewed to determine whether defects were corrected. Failure to correct mechanical defects or record the repair are cited as violations.

SENATOR LAUTENBERG: Please outline the progress you have made in the "SAFETYNET" management information system. How and when will the system aid in your efforts to ensure compliance with out-of-service orders?

ANSWER: SAFETYNET is a cooperative effort to share commercial motor carrier data electronically among States and FHWA. Forty-three States are participating in the inspection module. States are beginning to use the accident module. The carrier review module will be available to States next year. States are using SAFETYNET to record compliance with out-of-service orders.

SENATOR LAUTENBERG: This is the third year that I have expressed concern that FHWA is not effectively addressing the problem of truck drivers violating the out-of-service citations issued by MCSAP inspectors. I understand that FHWA has funded several research projects that show that an average of roughly 9 percent of the truck drivers attempt to beat the system. What has FHWA done to ensure that this problem is taken care of?

ANSWER: FHWA has initiated several studies in States to review the scope of the problem. Last year one State, Michigan, had reinspection results. Since then, three more (Oklahoma, Idaho, and Wisconsin) have completed studies on out-of-service violations. Two more States, Pennsylvania and Maine, will have results from their studies this summer. The 9 percent cited in the question is consistent with the results of these studies.

All trucks which fail roadside inspections should have the safety defects repaired. Mandating verification may not be warranted given the rate of noncompliance as shown in the studies above. It would divert resources from enforcement personnel's primary inspection responsibilities.

SENATOR LAUTENBERG: In last year's testimony (p.71), Mr. Morgan stated that FHWA was going to let a contract to examine from a "cost-to-cure" basis the problem of trucks violating the out-of-service orders. When was this contract signed?
ANSWER: The contract was awarded in February 1990.

SENATOR LAUTENBERG: Why did it take so long?
ANSWER: We advertised last summer for proposals. Two proposals were submitted, and both were technically unacceptable--we readvertised last fall.

SENATOR LAUTENBERG: When will results be made public?
ANSWER: A final report is due in summer 1992.

SENATOR LAUTENBERG: What are FHWA's priorities for the motor carrier program in 1990?
ANSWER: FHWA's priorities for the motor carrier program in 1990 are to increase enforcement, implement the drug testing rule, work with the States to implement CDL, hire 150 new safety specialists, and increase uniformity among States in roadside inspections and penalties.

SENATOR LAUTENBERG: Has FHWA ever rejected the SEP of a State for not effectively addressing this problem?
ANSWER: No.

SENATOR LAUTENBERG: Will FHWA take CVSA's recommendations on verification strategies and make them MCSAP requirements? If not, why not?
ANSWER: The CVSA's recommendations on verification strategies will be carefully considered by FHWA for adoption as MCSAP requirements.
The FHWA is studying the effectiveness and costs of alternative verification procedures. The FHWA believes the costs and benefits of possible remedies should be examined before instituting significant new requirements on the MCSAP agencies.

SENATOR LAUTENBERG: As stated in Senate Report 101-121, the Committee is considering legislation that would prohibit the funding of MCSAP in those States without an effective, year-round verification program to ensure that out-of-service defects are fixed in a timely manner.
For each of the States now participating in MCSAP, please describe in detail what methods are used to verify that out-of-service defects are fixed properly. (Do not include in your descriptions industry self-certification of the inspection form because this method of verification is subject to question.) Please note those States that consistently and periodically recheck vehicles and drivers by positioning officers down the road.
ANSWER: State enforcement personnel use several techniques to verify that out-of-service defects are fixed properly. They ask for the driver's keys to the truck and keep them while the driver fixes the defects. They will periodically check whether a driver is fixing the defects while continuing with the next vehicle inspection(s). They ask the driver to rest in the truck berth

until he or she may drive without violating hours-of-service requirements. Sometimes enforcement personnel will wait down the road and watch for drivers who leave the inspection site before fixing the defects which they agreed to repair. FHWA does not have a formal tally of which States use these various techniques.

SENATOR LAUTENBERG: What does FHWA see as the major priorities for MCSAP in the 1990's?

ANSWER: The major priorities for MCSAP in the 1990's are to: 1) increase State participation in carrier reviews, 2) obtain MCSAP reauthorization, and 3) achieve uniformity in regulations, fines, and penalties.

DRUG ENFORCEMENT AND MCSAP

SENATOR LAUTENBERG: Please describe the sources of funding for Project Deacon and its successor, Operation DIAP (Drug Interdiction Assistance Program).

ANSWER: Project DEACON was funded as part of MCSAP. DIAP is funded through a separate appropriation provided in the 1990 appropriations bill.

SENATOR LAUTENBERG: In view of the successes of these programs, why wasn't additional funding requested for continuation of the drug awareness and enforcement effort?

ANSWER: Additional funding was not requested because drug awareness and enforcement are already eligible activities under the MCSAP program. FHWA is encouraging States to include these types of activities in their State Enforcement Plans.

To date, 590 drug related arrests have been made by State personnel. Among these arrests are eight significant seizures which resulted in the confiscation of 1,163 pounds of cocaine (valued at $13.2 million), 8,677 pounds of marijuana (valued at $49.5 million) and $702,994 in U. S. currency.

MCSAP, FHWA AND NHTSA COOPERATION

SENATOR LAUTENBERG: What evidence is there that speeding or violating traffic safety regulations is a major causal factor in accidents involving commercial motor vehicles?

ANSWER: A 1985 Departmental study showed that speed and speed-related violations were a major factor in over 40 percent of the cases studied.

SENATOR LAUTENBERG: How does MCSAP address enforcement of speeding, traffic safety regulations, or other operating practices?

ANSWER: Generally, MCSAP funds do not support these activities. They are funded by other Federal programs.

SENATOR LAUTENBERG: Why doesn't MCSAP devote sufficient attention to violations of these regulations which play a major role in many commercial motor vehicle accidents?

ANSWER: MCSAP funds enforcement of the motor carrier safety regulations. NHTSA funds traffic enforcement activities. Both agencies work together as appropriate.

SENATOR LAUTENBERG: Which agency of the DOT addresses these concerns, what funds are devoted to these areas specifically for commercial vehicle enforcement, and how effective are these programs?

ANSWER: States use NHTSA 402 funds to support speed enforcement, traffic enforcement, and other traffic safety activities. States use MCSAP funds to enforce commercial vehicle and driver safety requirements. FHWA believes these programs are effective and complement one another.

SENATOR LAUTENBERG: How could MCSAP play an increased role in the enforcement of these traffic safety violations?

ANSWER: The current role of NHTSA in traffic safety enforcement is appropriate. A change in the MCSAP role is unwarranted.

SENATOR LAUTENBERG: Please describe how FHWA, working cooperatively with NHTSA, could set up four or five demonstration projects under MCSAP to promote speed and traffic enforcement of commercial motor vehicles?

ANSWER: Under an expanded MCSAP, the FHWA would consider establishing demonstration projects to promote speed and traffic enforcement of commercial motor vehicles. Using the existing joint FHWA/NHTSA coordination group high accident locations on roadways could be identified for special increased enforcement activities. An evaluation plan would be coordinated with State officials.

SENATOR LAUTENBERG: What role could NHTSA play in assisting FHWA in implementing the MCSAP?

ANSWER: The FHWA and NHTSA have recently established a working group in headquarters to improve coordination between the two agencies' ongoing safety programs such as the MCSAP and the Section 402 Program. FHWA and NHTSA coordinate activities that are of mutual interest.

SENATOR LAUTENBERG: How could a strengthened truck speeding and traffic enforcement program be implemented by using OMC's divisional offices, MCSAP offices, and the broader law enforcement community, and by promoting closer FHWA and NHTSA cooperation?

ANSWER: NHTSA reports that it will expand efforts to work directly with law enforcement, safety groups and trucking industry associations in compiling information on effective commercial vehicle programs. FHWA will coordinate with NHTSA on this endeavor.

COMMERCIAL DRIVER'S LICENSE

SENATOR LAUTENBERG: What action is FHWA taking to ensure that States test and license all their commercial drivers by April 1, 1992? For example, what is being done in States like Massachusetts that does not plan to begin testing and licensing its 235,000 drivers until April 1, 1991?

ANSWER: FHWA took into account the challenge posed to the States by the compliance timetable included in the Act in both the development and implementation stages of the Commercial Driver's License (CDL) program. In the development stage, the FHWA prepared Federal regulations and standards that offer States significant administrative flexibility, so that each State can decide how best to implement its program. For example, a State has the option to test drivers well before it is ready to interface with the

Commercial Driver's License Information System (CDLIS) and issue CDLs. The administration of the knowledge tests to large groups of applicants (mass testing), the use of "third parties" to administer the skills tests, and skills test "grandfathering" of certain drivers with good driving records are three other time saving measures offered to the States.

To assist States during the implementation phase of their programs, the FHWA and the American Association of Motor Vehicle Administrators (AAMVA) have jointly established teams to work with the States on the administrative and technical details of implementing their CDL programs. This assistance includes conducting meetings, such as the recently completed series of regional workshops nationwide; disseminating written guidance materials; responding to written and telephone inquiries; and conducting on-site visits to individual States to provide one-on-one problem solving sessions and to review, evaluate and make recommendations on program development and implementation.

Over the years, Massachusetts has been recognized as a leader in the field of highway safety and commercial driver licensing. In fact, Massachusetts's current road test for truck and bus drivers already meets the Federal skills test standards under the CDL program. Based on our dealings to date with Massachusetts, we believe that the implementation of the CDL program is a challenge that its officials can and will meet. Indeed, Massachusetts representatives have expressed confidence in being able to meet the April 1, 1992 compliance date. However, should Massachusetts encounter any unforeseen obstacles, the FHWA is prepared to offer technical assistance necessary to overcome the problems. We understand that knowledge testing of its drivers may begin as early as September 1, 1990.

SENATOR LAUTENBERG: Is action being taken to ensure that drivers, in states having a limited amount of time to complete testing and licensing, do not wait until the last month or two to come in and obtain a license?

ANSWER: The States are aggressively developing and implementing their CDL programs with the intent of licensing all commercial drivers by the April 1, 1992 deadline. In general, the States are seeking to accelerate their normal renewal cycles by scheduling the testing and licensing of commercial drivers over the months remaining before April 1992. Thirteen States are currently issuing CDLs. We believe the States will meet the deadlines.

SENATOR LAUTENBERG: The American Association of Motor Vehicle Administrators [AAMVA] has suggested that some States may need additional Federal funding to overcome problems in implementing their CDL programs and completing the licensing of all drivers by April 1, 1992. Does FHWA believe that States will need additional Federal funds, and if so, are such funds being requested in the current budget proposal?

ANSWER: The FHWA is working with the AAMVA and the States to determine whether a need exists. For now, FHWA believes current funding is adequate.

SENATOR LAUTENBERG: What is the total amount of funding available in FY 1990 and FY 1991 to implement the program? Is this enough?

ANSWER: There is $13 million of Federal funds available annually for FY 1990 and FY 1991. It should be adequate.

SENATOR LAUTENBERG: How does FHWA ensure that drivers that have been disqualified by the FHWA are not receiving a CDL from any of the States issuing a CDL?

ANSWER: FHWA notifies the States when disqualifying a driver.

SENATOR LAUTENBERG: With respect to the disqualification provisions of P.L. 99-570, will the States be disqualifying drivers or will this be solely a Federal responsibility?

ANSWER: Both FHWA and States will disqualify drivers.

SENATOR LAUTENBERG: How will FHWA ensure that States issuing the CDL properly monitor third party testing?

ANSWER: As a prerequisite to issuing CDLs, a State needs to obtain confirmation from FHWA that its procedures meet the minimum Federal standards. This confirmation is based on a State program review conducted by the FHWA. As part of the review, the agreement reached by the State and its third party testers is examined to verify that all the conditions of the third party testing program are met. One of the required clauses in the third party testing agreement allows the FHWA or its representative and the State to conduct random examinations, inspections and audits without prior notice. The States will do most of these inspections. FHWA, the States, and AAMVA are developing procedures which will include controls for monitoring third party testing.

SENATOR LAUTENBERG: How will FHWA ensure that the CDL program is carefully integrated into MCSAP?

ANSWER: The CDL program is integrated into the MCSAP. State inspectors already check driver licenses. They will have access to the Commercial Driver's License Information System.

SENATOR LAUTENBERG: How will inspectors be able to check the validity and status of CDLs at the roadside?

ANSWER: Most State personnel radio a central office to determine the status of the license. CDL information will be more readily available after the information system is operational in all States.

COMMERCIAL DRIVER'S LICENSE (CDL)

SENATOR LAUTENBERG: Are sufficient funds available in the MCSAP account to ensure that such checks will be made?

ANSWER: FHWA will address this as part of the MCSAP reauthorization.

SENATOR LAUTENBERG: What technology is available to assure such checks?

ANSWER: Commercially available telecommunications and computer equipment is available to the States.

SENATOR LAUTENBERG: What capital and yearly operating costs are required to set up a system that would allow the CDLs presented at the roadside to be checked as to validity and status (Please provide detailed information describing how these costs were calculated and relevant assumptions.)

ANSWER: The estimated capital costs would be $2-$3 million. The estimated costs are $200,000 and $300,000 annually, assuming 500 checkpoints nationwide and 1 million inquiries per year.

SENATOR LAUTENBERG: What is the relationship between the CDL program and the National Driver Register?

ANSWER: The National Driver Register (NDR) is a list of those drivers who have had their driving privilege withdrawn or have been convicted of serious driving violations. States will check NDR and CDLIS before issuing CDLs.

SENATOR LAUTENBERG: Will these two systems be integrated?

ANSWER: The Commercial Driver's License Information System (CDLIS) and the NDR will continue to be separate systems. States check both CDLIS and NDR before issuing a CDL. A single computer terminal inquiry by the licensing official accesses both systems.

SENATOR LAUTENBERG: Please describe how FHWA implemented the Committee's directive on page 73 of Senate Report 100-121 regarding "notification of inspection results." Describe how implementation of this directive improved the effectiveness of FHWA's driver disqualification program.

ANSWER: The Senate report suggested that FHWA encourage States to send physical copies of inspection reports to FHWA because SAFETYNET was not yet capable of assembling and reporting on the results of these inspections. FHWA used this technique when it conducted most roadside inspections prior to MCSAP. It is no longer practical now that States are conducting 1.3 million inspections under MCSAP. Forty-three States are submitting inspection data through SAFETYNET. FHWA expects the remaining States to begin entering data in the coming year. Requiring States to send paper copies of inspection reports would be laborious, and resources are better spent by working with States to enter inspection data into SAFETYNET. This directive will not affect our driver disqualification program.

OMC'S PROCEDURES REGARDING HAZARDOUS MATERIALS CARRIERS

SENATOR LAUTENBERG: Last year, FHWA testified that procedures were being modified to shut down all or part of a motor carrier's operations for transporting hazardous materials (HM) until the carrier corrected the deficiencies which pose an imminent danger to the public. How many motor carrier with an unsatisfactory safety rating are transporting hazardous materials?

ANSWER: As of May 1990, 695 hazardous materials carriers were rated unsatisfactory. This number constantly changes as new safety reviews identify additional unsatisfactory rated motor carriers and as carriers improve their rating.

SENATOR LAUTENBERG: How many motor carriers of HM have been shut down because of deficiencies FHWA found in the carriers operations?

ANSWER: None.

SENATOR LAUTENBERG: What are some of the deficiencies that warrant closing down a carrier's operation?

ANSWER: Some of the deficiencies that warrant closing down a carrier's operation are: 1) failing to comply with Federal safety requirements, 2) violation of critical safety and hazardous materials regulations, and 3) failing to achieve a satisfactory rating after follow-up reviews.

SENATOR LAUTENBERG: How will you make sure that a carrier has adequately corrected the deficiencies before again transporting hazardous materials?

ANSWER: FHWA will conduct a follow-up compliance review to determine whether the carrier has corrected the deficiencies.

MOTOR CARRIER SAFETY AND COMPLIANCE REVIEWS

SENATOR LAUTENBERG: FHWA has reported that 5 percent of carriers have received an unsatisfactory safety rating and 47 percent have received a conditional rating. Generally no enforcement actions are taken based on safety reviews. Given that 52% of rated carriers have received a less than satisfactory safety rating and no enforcement actions pertaining to safety violations are taken, what is the benefit of conducting safety reviews?

ANSWER: A FHWA safety specialist completes a safety review at the carrier's principal place of business. FHWA assesses a carrier's safety management controls (primarily through a records review), ensures that the carrier is complying with Federal safety requirements, and assigns the carrier a safety rating. FHWA assigns the carrier a safety compliance rating of "satisfactory," "conditional," or "unsatisfactory." Safety ratings are used to prioritize less than "satisfactory" carriers for future compliance reviews.

SENATOR LAUTENBERG: Why are no enforcement actions taken against less than satisfactory rated carriers directly as a result of a safety review?

ANSWER: Enforcement actions may be taken as a direct result of safety reviews if the motor carrier has failed to maintain the required level of financial responsibility or supply proof of financial responsibility coverage.

If a safety review results in an unsatisfactory rating, then a more detailed compliance review is conducted which may lead to enforcement actions.

SENATOR LAUTENBERG: How many safety reviews did FHWA safety investigators conduct in 1989? How many safety reviews are expected to be conducted in 1990 and 1991?

ANSWER:

Fiscal Year	Safety Reviews
1989	9,665
1990	9,700
1991	10,000

SENATOR LAUTENBERG: Previously, FHWA set a goal of providing a safety rating to all interstate motor carriers by 1992. Will this goal be achieved? If not, why not?

ANSWER: The goal of providing safety ratings to all carriers by 1992 may not be achieved. In mid-1989, FHWA changed program emphasis to spend more time on enforcement rather than educational activities. More resources are being devoted to compliance reviews than originally contemplated.

MOTOR CARRIER ADMINISTRATION

SENATOR LAUTENBERG: In a recent report, the Office of Technology Assessment (OTA) concluded that the division of responsibility among FHWA, NHTSA and RSPA hampers motor carrier safety problem solving. Do you agree? If not, why not?

ANSWER: The current DOT organization does not hamper safety problem solving. As OTA notes, DOT capitalized on its current organization to successfully implement the Commercial Driver's License Program.

SENATOR LAUTENBERG: The American Trucking Associations and OTA have recommended establishing a Motor Carrier Administration. What are FHWA's views on the advantages of having a Motor Carrier Administration that would merge certain activities of NHTSA, RSPA, and FHWA? What are the disadvantages?

ANSWER:

Advantages:

1) It would create a single agency whose sole responsibility would be motor carrier safety.
2) There are separate modal administrations within DOT for rail, aviation, and maritime activities.
3) A Motor Carrier Administrator would be a high-level official in dealing with industry representatives.

Disadvantages: (advantages to keeping the motor carrier safety functions under FHWA)

1) The motor carrier industry receives high-level attention from the Secretary, Federal Highway Administrator and the FHWA Associate Administrator for Motor Carriers.
2) The current organization builds upon the traditional Federal/State relationship of FHWA -- as done with the MCSAP and CDL Programs.
3) A separate Motor Carrier Administration could never mirror field organization of FHWA -- fully staffed offices in each State capital and major cities.
4) The transition to a new, separate administration could divert resources and distract the attention of staff who currently manage the motor carrier transportation program and could thereby delay important safety initiatives.

SENATOR LAUTENBERG: Short of merger, are there activities and/or responsibilities now residing in NHTSA or RSPA that could better be administered by FHWA? If so, which ones?

ANSWER: The current activities and responsibilities of these agencies are appropriate and administered effectively.

SENATOR LAUTENBERG: Can the Congress consider FHWA's view on this as the position of the Department of Transportation?

ANSWER: Yes.

CVSA STICKER

SENATOR LAUTENBERG: Increasingly, the Subcommittee staff is hearing stories of trucks stopped for roadside inspections several times on the same trip. Please discuss whether and how FHWA is promoting increased use of the Commercial Vehicle Safety Alliance (CVSA) sticker.

ANSWER: FHWA supports the use of CVSA stickers and promotes their use through participation on CVSA committees and in day-to-day contact with State officials.

SENATOR LAUTENBERG: Isn't it usually a waste of resources when a truck with a current CVSA sticker is inspected?
ANSWER: Yes, unless an obvious safety defect is noted on a truck.

SENATOR LAUTENBERG: Why do some States not honor the CVSA sticker?
ANSWER: There appears to be some disagreement regarding CVSA's procedures and inspection standards.

MCSAP GRANT PROCESS AND FUNDING CONSTRAINTS

SENATOR LAUTENBERG: When was the last time that FHWA reviewed the basic allocation formula used to distribute MCSAP primary grants?
ANSWER: FHWA reviewed it last fall.

SENATOR LAUTENBERG: Does this process need to be improved?
ANSWER: The process is working well.

SENATOR LAUTENBERG: Some States receive a basic grant, a discretionary grant and then a secondary grant. Isn't this process rather burdensome, complicated, and inefficient?
ANSWER: State programs vary in their maturity. As State programs advance, needs change. The current funding allocation approach allows the FHWA flexibility in distributing funds where they will be most effective in addressing program needs. Changes to the allocation formula and the funding availability will be considered as part of the reauthorization proposal.

SENATOR LAUTENBERG: How could the various grant processes be combined?
ANSWER: FHWA will address this as part of the reauthorization proposal.

SENATOR LAUTENBERG: What is the relationship between the various types of funding requests and available MCSAP funds?
ANSWER: MCSAP States are funded for two phases, program development and implementation. The funds available to a State in any one year for development purposes cannot exceed $50,000. The funds available to a State for implementation in any one year are distributed according to an allocation formula. This formula is based on five factors (road mileage, vehicle miles travelled, number of commercial vehicles over 10,000 pounds, population, and diesel fuel consumption. Funds which have not been awarded through the allocation formula and unused funds from previous years are put in a discretionary pool and redistributed to other States requesting additional funds.

SENATOR LAUTENBERG: How many States are dependent on discretionary funds to support essential inspector personnel?
ANSWER: Discretionary funds support inspection activities in 17 States.

SENATOR LAUTENBERG: What States are not participating in MCSAP and what is FHWA doing to encourage these States to join the MCSAP community?

ANSWER: Florida and South Dakota are not participating in MCSAP. FHWA has informed Florida officials of the regulatory changes needed for Florida to be eligible. FHWA is sharing information on the benefits of the program with South Dakota officials and attempting to convince it to participate.

MOTOR CARRIER INSPECTOR TURNOVER RATE

SENATOR LAUTENBERG: During last years's appropriations hearings, FHWA said that they were having problems keeping motor carrier inspectors in high cost areas. FHWA said that they were working on a pay differential plan to submit to the Congress. Are you continuing to have problems keeping qualified motor carrier inspectors in high cost areas?

ANSWER: The situation has improved for new hires as a direct result of two actions we have already implemented: We are now recruiting for the entry-level Motor Carrier Training Program at the GS-7 level rather that at GS-5, and applicants for jobs will know in advance the geographic area where they will be assigned.

SENATOR LAUTENBERG: What is the status of your plan to offer some sort of pay differential to inspectors in these high cost areas?

ANSWER: Senator Roth recently introduced the Federal Pay Reform Act of 1990 (S 2547), which addresses special pay rates for certain high cost cities and creation of a local pay setting process for technician and clerical positions. This pay bill would alleviate our problems.

SENATOR LAUTENBERG: How much would inspectors' pay need to be supplemented to encourage them to stay?

ANSWER: At entry level, the change in our recruiting practice from GS-5 to GS-7 has been effective. We anticipate that the pay bill would be helpful in the locations it covers.

SENATOR LAUTENBERG: How much money would a pay differential plan for inspectors cost, and is the funding requirement included in this budget?

ANSWER: No funds have been requested for pay differentials. We do not have a cost estimate.

SENATOR LAUTENBERG: Which areas do you consider high cost?

ANSWER: New York City, New York (including the northern New Jersey suburbs); Newark, New Jersey; San Francisco and Los Angeles, California; Boston, Massachusetts; Hartford, Connecticut.

MOTOR CARRIER SAFETY AND COMPLIANCE REVIEWS

SENATOR LAUTENBERG: How many compliance reviews did FHWA investigators conduct in 1989? How many compliance reviews are expected to be conducted in 1990 and 1991?

ANSWER: Fiscal Year	Compliance Reviews
1989	8,575
1990	8,800
1991	14,000

SENATOR LAUTENBERG: What enforcement actions are available to FHWA following compliance reviews against carriers not complying with federal motor carrier safety regulations? What is the maximum penalty available? How long is a carrier given to correct safety deficiencies before being assessed the maximum penalty?

ANSWER: Enforcement actions available to the FHWA are:

- Civil penalties ranging between $500 and $10,000 for each offense.
- Criminal penalties up to $25,000 for each offense and imprisonment of up to one year, or both.
- Compliance orders (which outline steps a carrier should take to correct safety deficiencies).
- Out-of-service orders (which require a motor carrier to cease all or part of its operation).

Enforcement is intended to induce improved compliance. FHWA may impose a maximum penalty upon identifying a safety deficiency. The amount of any penalty takes into account the nature, circumstances, extent, and gravity of the violation committed and, with respect to the violator, the degree of culpability, history of prior offenses, ability to pay, and effect on ability to continue to do business. Generally, FHWA imposes maximum penalties only where the carrier does not comply with Federal safety requirements after paying lesser penalties.

SENATOR LAUTENBERG: How many times have enforcement actions been taken against carriers not complying with regulations? What actions have been taken? Please provide the total amount of fines assessed and collected for FY 1988, 1989, and 1990 to date.

ANSWER: The following table summarizes the number of enforcement cases prosecuted and closed, and the total amount of fines assessed and collected in FYs 1988 and 1989, and projected for 1990.

Fiscal Year	Enforcement Cases Prosecuted & Closed	Amount of Fines Assessed	Amount of Fines Collected
1988	456	$3,969,000	$1,998,647
1989	880	$5,229,000	$3,899,000
1990 (proj.)	1,200	$6,533,333	$4,900,000

SENATOR LAUTENBERG: How many of the 150 investigators approved in the FY 1990 budget have been hired? What training is being provided for these investigators?

ANSWER: As of early May, 51 have been hired and are on board. Offers have been made and accepted for all of the remaining positions. They will be hired this year. All new hires must pass a 6-week course of instruction that includes intense training in the content and requirements of the Federal Motor Carrier Safety Regulations and Hazardous Materials Regulations. Upon returning to their duty locations after the 6-week course, the new investigators will receive 12 months of on-the-job training.

EXEMPTIONS FROM MOTOR CARRIER SAFETY REGULATIONS

SENATOR LAUTENBERG: OTA's September 1988 report, Gearing Up For Safety, states that trucks operating in intrastate, private, government, and exempt services perform a major share of the nation's motor carrier transportation. While safety regulations have gradually been extended to these carriers, OTA concluded that a comprehensive heavy vehicle safety program must extend safety regulations to all heavy vehicles and operators in all states. They said that the need for safety does not vary with the type of operation, and no exemptions from safety regulations, including the Commercial Driver's License, are warranted. Does FHWA agree with OTA's conclusions?

ANSWER: FHWA believes that all vehicles should be in a safe operating condition and that all truck and bus drivers should operate in a safe manner. Safety regulations are being extended to all carriers, particularly intrastate operations as States adopt compatible requirements under MCSAP. However, FHWA disagrees with the conclusion that no exemptions are warranted. Exemptions are appropriate when they are not contrary to the public interest and do not diminish the safe operation of commercial motor vehicles.

SENATOR LAUTENBERG: What has FHWA done to eliminate exemptions from safety regulations?

ANSWER: In 1988, the FHWA repealed the major exemption to the rules--the commercial zone exemption. FHWA modified those requirements earlier this year to reflect the grandfather provisions of the Truck and Bus Safety and Regulatory Reform Act of 1988. Through MCSAP and the efforts of the Commercial Motor Vehicle Safety Regulatory Review Panel, FHWA is working closely with the States to increase the compatibility of State and Federal safety requirements, especially in cases where States provide exemptions for carriers subject to the Federal safety requirements.

SENATOR LAUTENBERG: What is the estimated number of heavy vehicles operating in intrastate service that may not be subject to FHWA safety regulations?

ANSWER: There are approximately 1.4 million heavy vehicles (trucks and buses over 26,000 pounds registered gross vehicle weight) operating in intrastate service.

SENATOR LAUTENBERG: What steps are being taken (or can be taken) to bring these vehicles under FHWA safety regulations?

ANSWER: States adopt and enforce compatible safety requirements as a condition for receiving MCSAP funds. FHWA is working with the States to remove or replace incompatible intrastate requirements.

SAFETY OF LARGER TRUCKS

SENATOR LAUTENBERG: Do you agree that safety is being compromised by allowing larger trucks on the Interstate System?

ANSWER: We do not agree. The National Academy of Sciences studied the effects of twin-trailer trucks and concluded that greater use of twins has little overall effect on safety. According to accident statistics, medium and heavy trucks have an accident rate of 250 accidents per 100 million miles of travel, compared to 340 for all vehicles.

SENATOR LAUTENBERG: What is the largest vehicle (width and length) that FHWA permits to use the Interstate Highway System? (List each State.)

ANSWER: The Surface Transportation Assistance Act of 1982 (STAA) requires the States to establish a uniform maximum width of 102 inches except in the case of Hawaii that was permitted to retain its 108-inch maximum width and those States that allow wider vehicles by special permit.

The STAA also requires States to allow truck tractors pulling at least a 48-foot semitrailer or a combination of a 28-foot semitrailer and a 28-foot trailer. The STAA requires States to continue to allow longer semitrailers if they were legally used prior to December 1, 1982. This sets the minimum length requirement for semitrailers on the Interstate System in more than half the States at longer than 48 feet and some States such as Louisiana and Oklahoma at semitrailers up to 59½ feet. Because these are minimum length requirements, States may allow longer versions of these combinations.

The following table gives the semitrailer lengths that the States allow:

State	Semitrailer Combination
Alabama	53.5
Alaska	48
Arizona	57.5
Arkansas	53.5
California	48
Colorado	57.3
Connecticut	48
Delaware	53
Dist. of Col.	48
Florida	48
Georgia	48
Hawaii	48
Idaho	48
Illinois	53
Indiana	48.5
Iowa	53
Kansas	57.5
Kentucky	53
Louisiana	59.5
Maine	48
Maryland	48
Massachusetts	48
Michigan	48
Minnesota	48
Mississippi	53
Missouri	53
Montana	53
Nebraska	53
Nevada	53
New Hampshire	48
New Jersey	48

TABLE (cont'd.)

State	Semitrailer Combination
New Mexico	57.5
New York	48
North Carolina	48
North Dakota	53
Ohio	53
Oklahoma	59.5
Oregon	53
Pennsylvania	53
Puerto Rico	48
Rhode Island	48.5
South Carolina	48
South Dakota	53
Tennessee	50
Texas	59
Utah	48
Vermont	48
Virginia	48
Washington	48
West Virginia	48
Wisconsin	48
Wyoming	57.3

SENATOR LAUTENBERG: What research does FHWA have underway concerning revising roadway standards to better accommodate the larger trucks at entrance/exit ramps and intersections?

ANSWER: We are in the final stages of awarding a contract entitled, "Development of Relationships Between Truck Accidents and Geometric Design." The report will include recommendations for improving the safety of trucks at entrance and exit ramps and at intersections.

OFFICE OF TECHNOLOGY ASSESSMENT (OTA) REPORT

SENATOR LAUTENBERG: OTA's September 1988 report, Gearing Up For Safety, concluded that, with few exceptions, existing heavy truck data and information resources have deficiencies that limit their value in supporting safety policies and programs. That report lists weaknesses in the following separate data bases maintained by FHWA: (1) Motor Carrier Management Information System, (2) Special Monitoring Study, (3) Motor Carrier Census File, (4) Highway Performance Monitoring System, and (5) Truck Weight Study. What is the total number of separate data bases maintained by FHWA?

ANSWER: The Motor Carrier Information System (MCMIS) is a single, integrated database containing comprehensive safety performance records of individual interstate motor carriers. This includes the Motor Carrier Census File of records. Therefore, there are 4 separate FHWA data bases relating to heavy truck information.

SENATOR LAUTENBERG: What is the level of funding for each of FHWA's data bases in FY 1990 and proposed for FY 1991?

ANSWER: In fiscal year 1990, the budget for MCMIS, including the motor carrier census file, is $3,072,000 for services and $919,000 for equipment. In fiscal year 1991, MCMIS is expected to cost $3,972,000 for services and $1,246,000 for equipment. The Special Monitoring Study is carried out as part of the States' general highway planning data function, as are the Highway Performance Monitoring System (HPMS) and the Truck Weight Study (TWS), and is funded through HPR funds. Additional costs for processing data and support personnel within the FHWA are estimated to be $200,000 for the HPMS and $100,000 for the TWS in both FY 1990 and 1991.

SENATOR LAUTENBERG: Please describe what FHWA is doing to overcome the weaknesses OTA cited for each of the data bases.

ANSWER: The OTA report cites two major weaknesses in MCMIS data: 1) census data is incomplete (carriers are missing from the data file) and, 2) accident data is incomplete and inaccurate. FHWA is taking steps to address these problems.

To identify carriers missing from the census data, FHWA matches roadside inspection reports with the census file to verify the existence of each carrier. Carriers not found in the census file are notified of their responsibility to identify themselves to FHWA. FHWA's new vehicle marking requirement is being enforced by State MCSAP personnel and many new carriers are being identified and have been added to the census file as a result. As SAFETYNET expands, State-submitted inspection and carrier review data will further assist us in identifying missing carriers.

To improve the accident database, FHWA will compare accident reports submitted by motor carriers with State-submitted accident information in the SAFETYNET accident module and notify carriers when discrepancies are found.

Progress is also being made in improving truck exposure data through the HPMS and the TWS. The discussion on pages 167 and 168 of the OTA report describes these efforts in terms of the 1984-1985 situation. The report also notes on page 174 our initial efforts to strengthen our exposure data through these systems. In 1985 the FHWA issued the Traffic Monitoring Guide (TMG) to the States which describes statistically-based procedures for counting vehicles, classifying the travel into 13 vehicle categories, and weighing trucks. These procedures build on the statistical sample of highways which exists in each State as part of the HPMS and make use of new and improving electronic technology for automatic vehicle classification (AVC) and weighing in motion (WIM). These efforts have been driven not only by the need for better exposure data, but perhaps equally as much by the need of FHWA and the States for better truck traffic data for a wide variety of pavement management activities. Specific initiatives by FHWA to promote these procedures have included training courses for State personnel, technology transfer projects to demonstrate the capabilities of new AVC and WIM equipment including sponsorship of national conferences, and providing maximum latitude to the States in the use of Federal-aid construction and planning funds for new equipment purchase and installation. The TWS has been integrated into the HPMS sample framework under the TMG umbrella. States are implementing these new procedures and technology.

SENATOR LAUTENBERG: For each of these data bases, what is FHWA's target date for having the system fully operational nationwide?

ANSWER: They are operational. However, FHWA is constantly seeking ways to improve the quality of the data and the delivery of information to users.

SENATOR LAUTENBERG: Please provide FHWA's views on the advantages/ disadvantages of centralizing NHTSA and FHWA accident and exposure data collection and analysis activities. What would be the short-term cost to centralize? What is the annual savings that centralization could be expected to generate?

ANSWER: There is no advantage to combining these activities beyond eliminating some minor data overlap in reporting fatal accidents that involve interstate trucks. The OTA report recommends coordination and uniformity between these activities, not centralizing them. NHTSA and FHWA coordinate data collection activities and periodically review definitions and procedures to assure uniformity. In addition, the two agencies work with such groups as the National Governors' Association, the National Safety Council, and the Transportation Research Board to improve safety information.

SENATOR LAUTENBERG: Can these, or should these, data bases be integrated one with the other, and with data bases maintained by NHTSA and RSPA? Please elaborate.

ANSWER: The systems should not be integrated. They were developed based on agency needs and provide the information required.

DRUG TESTING REQUIREMENTS

SENATOR LAUTENBERG: What is the status of motor carrier drug testing requirements?

ANSWER: On November 21, 1988, the Department published drug testing procedures for transportation employers. Any driver testing positive may not operate a commercial vehicle.

Motor carriers with 50 or more drivers began testing all interstate drivers of commercial motor vehicles in December 1989. Smaller carriers must begin testing by December 1990.

Carriers are required to test drivers before employment, periodically, and based on reasonable cause. Post-accident and random testing requirements are delayed pending Federal court action.

SENATOR LAUTENBERG: Please provide a chronology of significant events of the drug testing rulemaking.

ANSWER: Rulemaking began in mid-1986. In June 1988, FHWA consolidated all rulemakings and a notice of proposed rulemaking was published. During the comment period the FHWA held a series of public hearings.

The FHWA published a final rule on November 21, 1988, simultaneously with other agencies within the Department of Transportation. In December 1989 the Department published a final rule on the procedural aspects of drug testing.

The FHWA has participated in many conferences and seminars to explain the rule to employers, drivers, and other interested parties.

ANNUAL INSPECTION REQUIREMENT

SENATOR LAUTENBERG: Briefly describe the new annual inspection requirement for commercial motor vehicles subject to FHWA's jurisdiction.

ANSWER: The Federal annual inspection requires, as a minimum, that every commercial motor vehicle subject to the FHWA's jurisdiction be inspected once each year and carry proof of that inspection. Commercial motor vehicles may meet the annual inspection requirements in several ways:

1. State-mandated inspection. Where the vehicles are subject to a State-mandated inspection equivalent to the Federal annual inspection;
2. Roadside Inspection. Where the vehicles have been subject to a State or other jurisdiction's roadside inspection equivalent to the Federal annual inspection;
3. Self-inspection. Where the motor carrier inspects the vehicles, following the Federal inspection requirements; or
4. Commercial shops. Where the motor carrier's vehicles inspected by commercial shops, garages or other third parties acting as agents of the motor carrier and the inspectors meet the Federal qualifications.

SENATOR LAUTENBERG: How has this requirement been received and implemented in the field?

ANSWER: The implementation of the final rule on annual inspection was delayed from December 1989 to July 1990. The FHWA believes that the implementation of the periodic inspection program combined with the roadside inspection program will ensure a greater degree of safety for motor carriers, drivers and other users of the highways. The implementation of the rule was delayed to permit FHWA to:

1. complete a review of States which have periodic inspection programs that are consistent with our standards;
2. amend the periodic inspection requirements to allow decals in lieu of inspection reports on each vehicle; and
3. clarify confusion about effective date of requirements due to a printing error in the Federal Register.

COMMERCIAL ACCIDENT PREVENTION PROGRAM (CAPE)

SENATOR LAUTENBURG: For each of the carriers that are or have been in CAPE, please provide quantitative evidence of the success of your CAPE program in terms of accident rate reduction of these carriers.

ANSWER: We are in the initial stages of implementing the program and assessing the results. One FHWA regional office has results available for 11 carriers which participated in the program for a 12-month period.

Data for 12 Months before entering program

Total Accidents	1,892
Total Miles	216,731,659
Total Accident Frequency Per Million Miles	8.72
Total Property Damage	$2,830,928

Data after 12 months:

Total Accidents	1,608
Total Miles	225,447,021
Total Accident Frequency Per Million Miles	7.13
Total Property Damage	$2,390,895

SENATOR LAUTENBERG: What are the specific costs and benefits of CAPE?

ANSWER: As FHWA is in the initial stage of implementing the program, specific cost and benefit data are not readily available.

SENATOR LAUTENBERG: What are the primary causes of preventable commercial motor vehicle accidents (include literature citations) and how does your CAPE Program address each one of these causes?

ANSWER: Accident causation is a complex phenomenon. Rarely, if ever, can any motor vehicle accident be attributed to a single cause. According to the study, "Identification of Preventable Accidents and Their Causes," about 95 percent of preventable accidents are related to driver factors and about 5 percent are vehicle-related. The CAPE Program identifies accident types and provides various countermeasures to assist motor carriers in reducing preventable accidents.

INCOMPATIBLE STATE MOTOR CARRIER SAFETY REGULATIONS

SENATOR LAUTENBERG: FHWA's Commercial Motor Vehicle Safety Regulatory Review Panel found that over 25 states have important commercial motor carrier safety regulations that are not compatible with Federal safety requirements. We understand that the Secretary has written to the Governors of the affected states about this situation. What is FHWA doing to follow-up on these letters?

ANSWER: FHWA used the responses when negotiating agreements under MCSAP to remove or replace the incompatible requirements. The Safety Panel used the responses to the letters to help prepare its report to the Secretary of Transportation. The Safety Panel expects to complete the report in July 1990. Thirty-five States now have requirements affecting interstate motor carriers operations that are compatible with Federal safety requirements.

SENATOR LAUTENBERG: Please explain how FHWA is addressing this requirement.

ANSWER: The Safety Panel has not identified any incompatible requirements which it believes the Secretary should preempt now. It believes that States have made significant progress under MCSAP to adopt and enforce compatible requirements. FHWA has negotiated with States under MCSAP to remove or replace incompatible requirements identified by the Safety Panel.

SENATOR LAUTENBERG: When will this requirement be complied with?

ANSWER: The Safety Panel recommends that States should remove or replace the remaining incompatibility requirements by July 1992. FHWA plans to implement the Safety Panel's recommendation through rulemaking later this year.

GOOD FAITH EFFORTS UNDER MCSAP

SENATOR LAUTENBERG: The Surface Transportation Assistance Act of 1982 requires States participating in MCSAP to enforce State motor carrier safety regulations that are compatible with Federal regulations. How many States do not meet this requirement for either intrastate or interstate regulations?

ANSWER: Twenty-nine MCSAP States are not compatible with respect to their intrastate regulations, and 16 are not compatible with regulations affecting interstate commerce.

SENATOR LAUTENBERG: For each State, what are the important deviations, specifying those intrastate or interstate in nature?

ANSWER: The areas of incompatibility include driver qualifications, hours-of-service, industry exemptions, and vehicle inspection report requirements.

SENATOR LAUTENBERG: How long are these incompatible regulations allowed to exist before a state loses MCSAP funds?

ANSWER: FHWA requires States to make necessary legislative or regulatory changes within 3 years.

SENATOR LAUTENBERG: How long have States with incompatible regulations been in MCSAP?

ANSWER: States with incompatible requirements have been in MCSAP several years.

SENATOR LAUTENBERG: What is FHWA's current "good faith" policy that allows States with deviations to continue to participate in MCSAP?

ANSWER: States may participate in MCSAP with incompatible provisions if they agree to a schedule of specific actions for enacting necessary changes within 3 years. A State may become ineligible for MCSAP funds if it relaxes a previously compatible requirement.

SENATOR LAUTENBERG: Why was Texas excluded from participating in MCSAP during FY 1989? Why did Texas qualify during FY 1990 for MCSAP funds? During this period, what changes occurred in Texas' compatibility with the Federal Motor Carrier Safety Regulations?

ANSWER: Texas rescheduled the effective date for enforcing compatible safety requirements beyond an earlier agreed date. Texas began enforcing compatible requirements effective October 1, 1989, and received MCSAP funds for FY 1990.

EFFECTIVE USE OF MCSAP DATA

SENATOR LAUTENBERG: Through MCSAP, FHWA has paid the States to submit inspection data to FHWA for many years. However, we have been told that FHWA is now providing profile data on specific motor carriers based on inspection data going back to only 1988. Is this correct? If so, what happened to the 1986 and 1987 inspection data collected by the MCSAP States for FHWA?

ANSWER: FHWA chose not to use 1986 and 1987 data due to major quality control improvements that were made in 1988.

SENATOR LAUTENBERG: Why isn't the 1986 and 1987 information incorporated into the FHWA's motor carrier profiles?

ANSWER: The data lack adequate quality and level of detail.

MCSAP AND BUS INSPECTIONS

SENATOR LAUTENBERG: State MCSAP officials have expressed concern over a new FHWA policy that strongly encourages the States to conduct frequent bus inspections along the roadside. What is the justification for this policy?

ANSWER: Buses are a top priority for FHWA because of the risk of a large number of people being injured in a single accident. Every year intercity buses transport more than 330 million passengers. Unannounced inspections at the roadside, terminals, parks, etc., are a key element in the motor carrier safety program because they provide an enforcement presence and identify carriers with safety problems for further State and Federal enforcement activities.

SENATOR LAUTENBERG: In terms of convenience to passengers and cost-efficiency, doesn't it make more sense to do more bus inspections at terminal or at parking lots?

ANSWER: Under the MCSAP, FHWA allows the States flexibility in determining how and where they conduct all of their vehicle inspections. MCSAP bus inspections are performed at the carrier's terminal, rest areas, weigh stations, stadiums, parks, and parking lots. Buses present unique problems for unannounced inspections because of passenger convenience and also because an intercity motor coach is low to the ground and an inspector cannot get under the bus to inspect the brakes without a pit, ramp, or lift.

FHWA is collecting information on the bus inspection techniques currently being used and will provide this information the States. This information will include the costs, effectiveness, staffing, etc., to give the States alternatives and options for increasing bus inspections that meet the needs of the individual State.

SENATOR LAUTENBERG: Do all States conduct bus inspections at terminal or parking lots? If not, why?

ANSWER: Some States choose to inspect buses at terminals or the parking lots of stadiums, parks, and fairs because they can inspect the bus when the passengers are not on board. This allows time for the bus company to get a replacement bus to transport the passengers if the first bus is placed out of service. Other States inspect buses at the carrier's terminal and use a lift or pit to do a Level I inspection.

While some States inspect buses at terminals or parking lots, other States have very active bus inspection programs where the buses are inspected with the passengers on board. These States have found this to be effective because (1) they can check both the driver and the bus; (2) a large number of buses can be inspected on a high traffic bus route where at a terminal they would have fewer buses to inspect and the drivers may not be available; (3) they may not have authority to issue citations unless the bus is on the highway; and (4) some small companies may not have a fixed terminal and it is difficult to find the buses for an unannounced inspection. These States may also use pits or portable ramps to enable a full Level I inspection of the buses.

1984 MOTOR CARRIER SAFETY ACT

SENATOR LAUTENBERG: The Subcommittee is concerned that FHWA is not making effective use of all of the penalty provisions of the Motor Carrier Safety Act of 1984. Of those civil penalty cases that were settled during FY 1989, how many involved the 1984 provision pertaining to substantial health and safety violations?

ANSWER: One hundred fifty-six civil penalty cases settled in FY 1989 involved penalties for a health or safety violation which could have led to, or had resulted in, serious personal injury or death.

SENATOR LAUTENBERG: Please discuss in detail how FHWA intends or could increase the use of this provision, make increased use of MCSAP inspection reports in the prosecution of cases involving this type of penalty, and how OMC could prosecute additional cases in such critical areas as defective equipment and driver fatigue.

ANSWER: The FHWA intends to utilize information provided by SAFETYNET to identify motor carriers having health and safety violations, as well as poor roadside inspection reports and high accident rates. Forty-three States are providing inspection-related information through SAFETYNET.

OFFICE OF MOTOR CARRIERS' (OMC) ASSISTANCE ON HAZARDOUS MATERIALS

SENATOR LAUTENBERG: S. Report 101-121 directed FHWA to increase substantially its hazardous materials training assistance to state governments. How are you accomplishing this directive? How does your FY 1991 budget reflect the Committee's interest in this area?

ANSWER: FHWA has developed a hazardous materials roadside inspection course and plans to conduct 20 classes for State personnel during FY 1991. FHWA funded the development of a 3-day hazardous materials training package and a 1½-day cargo tank course. These courses will be available to State enforcement personnel.

SENATOR LAUTENBERG: How does FHWA's OMC coordinate its hazardous materials transportation efforts with those of RSPA? Please list the frequency and nature of hazmat regulatory and enforcement training provided to state enforcement officers by FHWA since FY 1990 started (compare to the 1989 effort).

ANSWER: FHWA and RSPA jointly sponsor hazardous materials training for State enforcement personnel through the Transportation Safety Institute. The training focuses on compliance with hazardous materials regulations. FHWA sponsored 30 classes in FY 1989 and has sponsored 11 thus far in FY 1990.

SENATOR LAUTENBERG: What has OMC done to be of assistance to the Federal Regional Response Teams? How do these teams help State hazmat personnel?

ANSWER: FHWA field staff participate on the teams and help provide training to hazardous materials personnel.

SENATOR LAUTENBERG: Under the ETA program, what forms of technical assistance and guidance specifically regarding HM transportation, (other than information regarding Part 397) are now being provided or distributed to HM highway carriers and shippers?

ANSWER: FHWA issues technical advisory bulletins to the industry in response to inquiries about hazarous materials regulations and activities.

SENATOR LAUTENBERG: What additional brochures or documents will be prepared by FHWA and when will these be distributed?

ANSWER: In 1988, FHWA developed an informational kit, "How to Achieve a Satisfactory Rating." FHWA and RSPA are developing a hazardous materials supplement which will be distributed later this year.

SENATOR LAUTENBERG: How effectively are you working with RSPA to accomplish this?

ANSWER: As noted above, FHWA and RSPA work cooperatively to provide hazardous materials technical assistance and training.

SENATOR LAUTENBERG: How is FHWA taking a significantly aggressive approach to providing technical advice and guidance to the HM community?

ANSWER: FHWA provides technical advice and guidance to the hazardous materials community through brochures, bulletins, training courses, and educational seminars.

OMC BACKLOG

SENATOR LAUTENBERG: A September 1989 internal evaluation of OMC's program conducted by the Office of the Secretary (OST) stated:

> Even with the additional 150 safety specialists requested in the FY 1990 budget, FHWA projects that, using current procedures, it would take until FY 1993 to rate the safety fitness of all interstate motor carriers and until FY 2006 to conduct a follow up compliance review for all carriers that receive an unsatisfactory or conditional safety fitness rating. The projection indicates that many carriers will not be rated at all for several years and that the benefits derived from subsequent follow-up reviews will not be achieved. Using this projection, for those carriers with less than a satisfactory rating, the average time between the safety review and the follow up compliance review will be over six years.

What can be done to reduce this backlog?

ANSWER: States are now conducting 10,000 reviews per year. If States continue to increase their review activity and once the new 150 FHWA safety specialists are hired and trained, it should help reduce this backlog.

SENATOR LAUTENBERG: Does this suggest the need to make more effective use of MCSAP officers to conduct follow-up compliance reviews?

ANSWER: Increasing State participation in compliance reviews will aid in reducing the backlog of carrier reviews. FHWA and the

States are exploring ways to expand State participation in carrier reviews.

SENATOR LAUTENBERG: What problems arise when FHWA uses MCSAP officers for these follow-ups and how is FHWA addressing these problems?

ANSWER: Problems appear to be centered on lack of experience. FHWA and the States are developing guidelines and sponsoring training for State personnel who conduct reviews.

SENATOR LAUTENBERG: What actions have been taken to date to implement each of the recommendations of the OST report?

ANSWER: The major recommendations of the OST report are to establish a non-site visit rating procedure, increase State conducted safety reviews, explore financing options for increased safety reviews, improve the motor carrier census, and establish procedures to shut-down imminently hazardous carriers. FHWA is considering the feasibility of non-site visit rating procedures.

States are now conducting 10,000 carrier reviews.

FHWA and States are exploring ways to increase State conducted safety reviews.

FHWA has not identified feasible alternatives to MCSAP for funding State safety reviews.

To identify carriers missing from the census data, FHWA matches roadside inspection reports with the census file to verify the existence of each carrier.

In May 1990, FHWA issued procedures to shut down all of part of a motor carriers operation which poses an imminent hazard to the public.

SENATOR LAUTENBERG: How does your FY 1991 request reflect the suggestions of OST?

ANSWER: The report recommends increased State participation in carrier reviews and that FHWA improve its carrier census. The 1991 request includes increased State participation in carrier reviews and provides for SAFETYNET expansion. As SAFETYNET expands, State-submitted inspection and carrier review data will assist in identifying carriers missing from the census.

SENATOR LAUTENBERG: The OST report suggests the use of non-site visit rating procedures. How could this process be used when it would rely on SAFETYNET, which is not fully operational in all MCSAP states?

ANSWER: Forty-three States are providing roadside inspection data through SAFETYNET; this number should increase to close to 50 by the end of 1990. FHWA would not rely heavily on non-site visit rating procedures until SAFETYNET can adequately support this effort.

SENATOR LAUTENBERG: Wouldn't any rating based on performance at the roadside be subject to serious question until more entries are input into SAFETYNET?

ANSWER: Ratings utilizing SAFETYNET data would have to be predicated upon indications of systemic problems and not isolated incidents.

OMC'S RESEARCH AND DEVELOPMENT BUDGET

SENATOR LAUTENBERG: FHWA's OMC annually spends roughly $1.2 to $1.7 million on research and development related to commercial motor vehicle safety. On a proportional basis relative to other DOT safety budgets, FHWA's OMC is spending substantially less on research activities than RSPA's Office of Hazardous Materials Transportation or FRA's Office of Safety. Why is this?

ANSWER: The FHWA budget for research and development related to commercial motor vehicle safety is adequate for FY 1990 and an increase is requested for FY 1991. However, given increasing program and regulatory responsibilities and the number of carriers, additional research may be needed in areas such as driver qualifications, driver fatigue and loss of alertness, vehicle and cargo safety and improving the management information system. FHWA plans to address these increased motor carrier research and development needs in its reauthorization proposal.

SENATOR LAUTENBERG: What areas of research regarding driver performance and other human performance factors are FHWA currently funding? Which other areas could be funded?

ANSWER: The FHWA is funding research on driver performance and other human performance factors. Major projects are in the areas of driver fatigue and alertness and medical qualifications. Another area worthy of study is improved driver information systems.

SENATOR LAUTENBERG: Is there a "master" 5-year plan to guide OMC's research and development activities?

ANSWER: Yes. FHWA is identifying research and development activities for the next few years.

SENATOR LAUTENBERG: In view of the fact that driver performance is a major cause of commercial motor vehicle accidents, please discuss how FHWA's research in this area could be substantially strengthened, what contributions to safety might result, when results might be available, and what costs might be anticipated?

ANSWER: FHWA is addressing a broad range of research and development needs as part of our reauthorization proposal. Driver performance research will likely be a major element.

OMC'S DETACHED OFFICES

SENATOR LAUTENBERG: We understand that over the last five years, FHWA's OMC has closed several "detached offices," which were separate offices in individual states that supplemented divisional offices in each of the states. How many of these offices were closed?

ANSWER: Four detached offices have been closed in the past 5 years.

SENATOR LAUTENBERG: What were the advantages and disadvantages of these closures?

ANSWER: The primary advantage to closing these offices was moving the staff to a single location. This provides for better supervisory oversight, cross-training opportunities and more flexibility in work assignments. The main disadvantages are increased travel time and costs.

SENATOR LAUTENBERG: In view of your increased staff allocation, is it now time to reopen some of these detached offices?

ANSWER: FHWA is reevaluating the need for detached offices.

SENATOR LAUTENBERG: We understand that closure of these detached or auxiliary division offices has required OMC inspectors to drive more than a hundred miles in some cases to carrier offices. Please discuss this situation, and whether it is more cost-effective to reestablish several detached OMC offices. Please discuss this situation, and whether it is more cost-effective to reestablish several detached OMC offices.

ANSWER: In March 1990, FHWA completed an analysis to identify objective criteria which could be used to determine if detached offices in specific locations would be more effective and efficient. In FY 1991 and 1992 FHWA will be using benchmarks to establish detached offices in those locations where it is warranted.

Specific criteria that will be considered include: 1) carrier population/workload; 2) distance from other FHWA offices; 3) size of division offices; 4) local factors--concentration of hazardous materials carriers and community involvement; 5) quality of life; 6) availability of experienced staff; and 7) cost benefit analysis.

OMC FIELD STAFF AND INFORMATION SYSTEMS

SENATOR LAUTENBERG: When will OMC field staff be able to use, and have ready access to CDLIS and AAMVAnet?

ANSWER: Field staff should be able to access CDLIS and AAMVAnet next year.

SENATOR LAUTENBERG: Please explain how OMC field staff could use these systems during FY 1991.

ANSWER: Field staff could use the systems to check the licensing status of commercial drivers.

SENATOR LAUTENBERG: Are there sufficient funds budgeted in your FY 1991 request to assure the use of these computer information systems? Please specify the amounts of any budgeted funds for this use.

ANSWER: There are sufficient funds budgeted in the FY 1991 request for this purpose. FHWA estimates an annual cost of about $20,000.

SENATOR LAUTENBERG: Last year FHWA requested and the Committee provided funds for 215 additional laptop computers. How many of these computer systems have been purchased?

ANSWER: FHWA is procuring 80 laptop computers in FY 1990. FHWA hopes to purchase the remaining computers in FY 1991 since FHWA reprogrammed some 1990 funds.

SENATOR LAUTENBERG: How many of these laptops are now used in the field.

ANSWER: There are 50 laptop computers in the field.

SENATOR LAUTENBERG: What are the identifiable benefits accrued from their use?

ANSWER: The use of laptops computers in the FHWA field offices has been successful. They improve our efficiency in completing carrier reviews and enforcement cases. Overall staff response is positive.

SENATOR LAUTENBERG: How were these determined?

ANSWER: They were determined through user surveys.

SENATOR LAUTENBERG: How did you quantify the benefits?

ANSWER: The quantifiable benefits were obtained from the user surveys. For example, enforcement case documentation, which requires a very formal and thorough process, was projected to average 20 hours less per case using the laptop. The average saving is about 17 hours.

SENATOR LAUTENBERG: How many laptops will be purchased during FY 1990?

ANSWER: Eighty laptops will be purchased.

SENATOR LAUTENBERG: Were funds that were originally intended for the purchase of these computers used for other purposes or otherwise reprogrammed? If so, why?

ANSWER: Yes, funds originally requested for laptop system procurement were diverted to cover urgently needed funds for unanticipated mainframe computer operating costs and development of the carrier review software. A short delay in purchasing laptops was viewed as not a significant detriment to program objectives.

OMC ACCOMPLISHMENTS FOR FY 1990

SENATOR LAUTENBERG: Please update for the record with FY 1989 data, Table 1 of the Senate Committee Print 101-30 (the CRS report on FHWA's program).

ANSWER:

Table 1. -- FHWA COMMERCIAL MOTOR CARRIER SAFETY STATISTICS

Year	1983	1984	1985	1986	1987	1988
Total Accidents	31,628	36,853	39,273	26,176	28,472	31,334
Fatalities	2,528	2,721	2,646	2,609	2,815	3,325
Injuries	26,692	29,149	28,988	25,092	27,450	31,440

Effective in 1986, the minimum reporting threshold for property damage accidents was increased from $2,000 to $4,200, and again in 1987 and subsequent years to $4,400 in order to more accurately account for the effects of inflation. This caused what appeared to be a dramatic decrease in accident counts from 1985 to 1986. FHWA believes the increase in accidents reported in 1988 is primarily the result of more widespread compliance with the accident reporting regulations.

OMC ACCOMPLISHMENTS FOR FY 1990

SENATOR LAUTENBERG: Please update for the record with FY 1989 data, Table 5 of the Senate Committee Print 101-30 (the CRS report on FHWA's program).

ANSWER:

TABLE 5. OMC Field Staff

STATE	1984	1985	1986	1987	1988	1989
Connecticut	1	2	2	3	3	3
Maine	1	2	-	3	3	3
Massachusetts	5	5	4	5	6	7
New Hampshire	1	1	1	2	1	1
New Jersey	5	4	4	8	7	6
New York	9	9	9	16	15	14
Rhode Island	1	-	1	1	1	1
Vermont	2	2	2	4	4	3
Puerto Rico	1	-	-	1	1	1
TOTAL	26/4	25/3	25/2	43/3	41/4	39/5
Delaware	1	1	1	1	2	2
Maryland	3	3	3	4	4	4
Pennsylvania	8	7	7	12	14	13
Virginia	6	4	3	4	6	5
West Virginia	1	1	1	3	3	3
Dist. of Columbia	-	-	-	-	-	1
TOTAL	19/3	16/2	15/3	25/3	29/4	28/4
Alabama	4	3	2	5	5	4
Florida	3	4	3	8	7	6
Georgia	3	3	3	7	6	10
Kentucky	2	2	2	5	8	8
Mississippi	2	2	2	3	4	4
North Carolina	2	3	3	5	8	7
South Carolina	2	2	2	4	4	4
Tennessee	3	3	3	7	9	7
TOTAL	21/4	22/3	20/3	44/3	51/4	50/5
Illinois	4	4	5	8	8	7
Indiana	3	3	3	3	8	8
Michigan	3	3	3	5	7	6
Minnesota	3	3	3	5	6	5
Ohio	6	5	4	4	7	8
Wisconsin	3	3	3	4	7	6
TOTAL	22/5	21/4	21/2	29/3	43/4	40/3
Arkansas	2	2	-	3	3	4
Louisiana	2	2	2	3	5	5
New Mexico	2	1	1	1	2	2
Oklahoma	2	1	-	3	4	4
Texas	7	8	8	12	13	14
TOTAL	15/5	14/3	11/2	22/4	27/4	29/4
Iowa	2	2	3	6	6	7
Kansas	3	3	2	5	4	5
Missouri	3	3	3	7	7	7
Nebraska	1	1	2	3	3	2
TOTAL	9/4	9/3	10/3	21/4	20/4	21/4

STATE	1984	1985	1986	1987	1988	1989
Colorado	2	3	3	2	6	5
Montana	2	2	2	2	2	2
North Dakota	2	1	1	1	2	2
South Dakota	1	1	1	1	2	2
Utah	2	2	2	2	3	3
Wyoming	2	2	2	1	2	2
TOTAL	11/4	11/3	11/2	9/3	17/4	16/4
Arizona	2	1	1	1	3	3
California	7	7	6	8	16	10
Hawaii	1	1	1	1	1	1
Nevada	2	2	1	1	3	2
TOTAL	12/2	11/3	9/3	11/3	23/4	16/2
Alaska	1	1	1	1	1	1
Idaho	1	2	2	3	4	3
Oregon	3	3	4	3	5	5
Washington	3	3	3	6	6	6
TOTAL	8/4	9/4	10/3	13/3	16/4	15/4
GRAND TOTAL	143/35	138/28	132/23	217/29	267/36	254/35

Source: FHWA

Note: Numerator = Total Professional Staff in Division Offices
Denominator = Total of Professionals in Regional Headquarters Office.

TABLE 6.--WORKLOAD STATUS AND STAFF UTILIZATION--REPORT PERIOD: FISCAL YEAR 1989 AND FOURTH QUARTER

	Work units					Staff hours utilized						
						Hours utilized this quarter on line item			Hours utilized to date for this line item			
Work item description	Item number	Annual work plan	Number done this quarter	Number done this year	Percent AWP complete to date	Duty	Travel	% to date	Duty	Travel	Total	Percent of total hours to date
Educational and technical assistance:												
SR-1 carrier	101	8791	894	8432	96	4511.0	1823.5	5	40242.5	16668.0	56910.5	12
SR-1 H/M carrier	102	1430	172	1233	86	0.0	0.0	-	0.0	0.0	0.0	-
Safety or H/M meetings	103	--	168	691	-	1090.0	419.0	1	4490.0	1745.5	6235.5	1
Special projects	105					1511.0	335.0	2	6944.5	1640.5	8585.0	2
Training presented	106					508.0	123.0	1	2001.5	510.5	2512.0	1
Driver waiver exam	107	--	20	153	-	278.0	137.0	0	1705.5	847.0	2552.5	1
Divided records authority	108					167.0	13.0	0	419.0	27.0	446.0	0
Public inquiries	109	--	32548	132278	-							
Carriers added	110	--	6182	21161	-							
Carriers deleted	111	--	2320	16510	-							
Training received	112					2403.0	619.0	3	27239.5	7835.0	35074.5	8
Monitoring and evaluating ETA	113					2126.0	75.0	2	9181.0	207.0	9388.0	2
Subtotal hours						12594.0	3544.5	14	92223.5	29480.5	121704.0	26
Selective compliance enforcement:												
Enforcement report--MCSR	201	994	450	1301	131	13935.0	999.5	13	41832.0	3197.5	45029.5	10
Enforcement report--H/M	202	100	27	68	68	960.0	81.0	1	2392.0	200.0	2592.0	1
Enforcement report--MCSR-H/M	203	134	33	124	93	1306.0	84.0	1	4208.5	268.5	4477.0	1
Enforcement report--drivers/other	204	--	36	116	-	595.0	84.0	1	1699.0	181.0	1880.0	0
Enforcement report--assist	205	--	80	318	-	785.0	215.0	1	3547.5	794.0	4341.5	1
CR-1 large	206	303	132	390	129	3869.0	1097.0	4	11562.0	3183.5	14745.5	3
CR-1 medium	207	1217	338	1070	88	4983.5	1545.0	6	18140.5	5726.5	23867.0	5
CR-1 small	208	4259	1955	4972	117	14639.0	5754.0	17	41029.0	15929.5	56958.5	12
CR-1 H/M carrier	209	974	551	1474	151	1558.0	419.0	2	5059.0	1194.3	6253.3	1

CR-1 H/M shipper	210	681	353	851	125	1139.0	442.0	1	2992.5	905.0	3897.5	1
CR-1 cargo tank manufacturer	211	10	2	6	60	54.0	18.0	0	99.0	29.0	128.0	0
CR-1 (Intra) financial resp. review	212	--	14	61	-	18.0	11.0	0	110.5	71.5	182.0	0
Driver/vehicle examinations	216	--	332	2310	-	443.0	208.0	1	3602.0	1427.0	5029.0	1
Driver/vehicle exam--bus	219	--	13	47	-	140.0	6.0	0	278.0	16.0	294.0	0
Monitoring and evaluating SCE	223					7883.0	295.0	7	22825.5	743.0	23568.5	5
Subtotal hours						52307.5	11258.5	54	159377.0	33866.3	193243.3	41
Commercial accident prevention evaluation:												
Number of carriers identified	301	--	17	75	-	49.0	13.0	0	69.0	13.0	82.0	0
CAPE contacts	302	120	30	180	150	274.0	29.0	0	1699.0	411.0	2110.0	0
Accident investigations	303	--	16	69	-	215.0	63.0	0	823.5	200.0	1023.5	0
H/M accident investigations	304	--	22	34	-	386.0	81.0	0	788.0	166.5	954.5	0
Monitoring and evaluating CAPE	305					561.0	29.0	0	1775.5	62.0	1837.5	0
Subtotal hours						1485.0	215.0	1	5155.0	852.5	6007.5	1
MCSAP:												
State and local technical assistance.	401					4260.0	379.0	4	14332.0	1328.0	15660.0	3
State and local training presented	402					712.0	145.0	1	3099.0	513.0	3612.0	1
Monitoring: site visit: drvr/veh insp	403	--	55	328	-	520.0	146.0	1	3136.0	967.0	4103.0	1
Monitoring: site visit: SR-1/CR-1	404	6109	65	293	5	394.0	119.0	0	1235.0	337.5	1572.5	0
Monitoring and evaluation: other	405					6256.0	486.0	6	21153.5	1449.0	22602.5	5
State complaint investigations	407	--	6	17	-	711.0	65.0	1	1070.0	85.0	1155.0	0
Subtotal hours						12853.0	1340.0	12	44025.5	4679.5	48705.0	10
Commercial driver license:												
Number licenses returned to states	501	--	2197	7187	-							
Number of enforcement actions	503	--	7	55	-	70.0	7.0	0	245.2	25.0	270.2	0
Unqualified driver letters issued	504	--	195	378	-	451.0	56.0	0	951.5	122.0	1073.5	0
Disqualification of driver letters	505	--	457	783	-	586.0	60.0	1	1251.0	108.0	1359.0	0
Subtotal hours						1107.0	123.0	1	2447.7	255.0	2702.7	1

Total staff hours available during this quarter - 116883. Year to date - 466339.

Source: FHWA

SENATOR LAUTENBERG: Please update for the record with FY 1989 data, Table 7 of the Senate Committee Print 101-30 (the CRS report on FHWA programs)

TABLE 7.--SELECTED PRINCIPAL ENFORCEMENT ACTIVITIES UNDERTAKEN BY FHWA

	Fiscal Year					
	1984	1985	198	1987	1988	1989
A. Number of enforcement cases recommended for prosecution involving alleged violations of:						
1. Motor carrier safety regulations (evidence collected)..	402	627	653	654	850	1,417
2. Hazardous material transportation regulations (evidence collected)......................	65	54	51	28	24	68
3. Motor carrier safety and hazardous materials transportation regulations (evidence collected)..........................	70	58	86	62	45	124
B. Other cases investigated but no evidence collected, no prosecution pursued..............................	831	1,142	1,800	106	0*	0*
C. Total number of enforcement cases recommended for prosecution..........	537	739	790	744	919**	1,609***
D. Number of enforcement cases prosecuted and closed....................	474	739	529	498	456	880
E. Amount of fines collected ($000s)....	795.8	788.9	1,877.3	2,009.6	1,998.6	3,899.0

*During 1987, internal change in FHWA policy eliminated this category of enforcement action.

**About 200 of these cases were later dropped.

***About 175 of these cases were later dropped.

Source: FHWA

SENATOR LAUTENBERG: Please update for the record with FY 1989 data, Table 10 of the Senate Committee Print 101-30 (the CRS report on FHWA programs).

Table 10.--OFFICE OF MOTOR CARRIERS WORKLOAD DATA

	Fiscal Year				
	1985	1986	1987	1988	1989
Number of driver/vehicle inspections.................	16,046	10,027	910	238	2,357
Number of safety audits/ Number of investigations.....	2,316	2,590	885*	919*	1,609*
Number of enforcement cases prosecuted and closed.......	739	529	498	456	1,133
Amount of fines collected ($000s)...........	788.9	1,877.3	2,009.6	1,998.6	4,591.1

*Beginning in FY 1987, investigations without evidence are included in safety audits/reviews.

SENATOR LAUTENBERG: Please update for the record with FY 1989 data, Table 11 of the Senate Committee Print 101-30 (the CRS report on FHWA programs)

TABLE 11.--FHWA'S MOTOR CARRIER SAFETY ACCOMPLISHMENTS FOR FY89 AND PROJECTIONS FOR FY90

Work item description	1989 accomplishments	1990 annual work plan
Educational and technical assistance:		
SR-1 carrier	8,432	8,791
SR-1 H/M carrier	1,233	1,430
Safety or H/M meetings	691	
Program assistance		
Special projects		
Training presented		
Driver waiver exam	153	
Divided records authority		
Public inquiries	132,278	
Carriers added	21,161	
Carriers deleted	16,510	
Selective compliance enforcement:		
Enforcement report--MCSR	1,301	994
Enforcement report--H/M	68	100
Enforcement report--MCSR-H/M	124	134
Enforcement report--drivers/other	116	
Enforcement report--assist	318	
CR-1 large	390	303
CR-1 medium	1,070	1,217
CR-1 small	4,972	4,259
CR-1 H/M carrier	1,474	974
CR-1 H/M shipper	851	681
CR-1 cargo tank manufacturer	6	10
CR-1 (Intra) financial resp. review	61	
Complaint investigations--driver		
Complaint investigations--other		
Complaint investigations--State		
Driver/vehicle examinations	2,310	
Out-of-service vehicles		
Out-of-service drivers		
Out-of-service buses		
Out-of-service bus drivers		
Driver/vehicle exam--bus	47	
Other drivers disqualified		
Monitoring and evaluating SCE		
Commercial accident prevention evaluation:		
Number of carriers identified	75	
CAPE contacts	180	120
Accident investigations	69	
Monitoring and evaluating CAPE		
MCSAP:		
State and local technical assistance		
State and local training presented		
Monitoring: site visit: drvr/veh insp	328	
Monitoring: site visit: SR-1/CR-1	293	6,109
Monitoring and evaluation: other		
State complaint investigations	17	

Work item description	1989 accomplishments	1990 annual work plan
Commercial driver license:		
Number licenses returned to states........	7,187	....
Number of enforcement actions.............	55	....
Unqualified driver letters issued.........	378	....
Disqualification of driver letters........	783	....

Source: FHWA

TSI ASSISTANCE FOR TRAINING STATE OFFICERS

SENATOR LAUTENBERG: Is it correct that even though some States participating in MCSAP want to conduct safety reviews of motor carriers, they have been unable to obtain on a timely basis the necessary training at TSI?

ANSWER: FHWA has not been able to accommodate all State requests for safety review training. With increased resources at TSI, FHWA will be offering more training opportunities this year.

SENATOR LAUTENBERG: Please describe the current situation and recent past experiences, including a discussion of the backlog of applications for TSI training on the conduct of safety and compliance reviews, the problems presented by this backlog, and possible solutions that FHWA has used or is working on to alleviate this problem.

ANSWER: As noted above, the additional courses should help reduce the backlog of requests for training.

SAFETY RATING SYSTEMS

SENATOR LAUTENBERG: During 1989, how many companies did FHWA bring an enforcement action against as a result of FHWA's first visit (SR)? How many visits were conducted?

ANSWER: Of the 9,665 safety reviews conducted during FY 1989, FHWA initiated enforcement actions on 76 occasions.

SENATOR LAUTENBERG: How many companies currently have an unsatisfactory safety rating and are still transporting any quantity or form of a DOT-regulated hazardous materials? (If an exact number is not available, please estimate.)

ANSWER: As of May 1990, 695 hazardous materials carriers were rated unsatisfactory. This number constantly changes as new safety reviews identify additional unsatisfactory rated motor carriers and as carriers improve their rating.

SENATOR LAUTENBERG: What is the relationship between a company's safety rating and its accident frequency and rate?

ANSWER: A motor carrier with a high accident frequency and rate is more likely to receive a less than satisfactory safety rating.

SENATOR LAUTENBERG: What research has FHWA done in this area?

ANSWER: Based on an internal FHWA study, carriers having over two reportable accidents per million miles are more likely to receive an unsatisfactory rating than those having less than one reportable accident per million miles.

SENATOR LAUTENBERG: Can FHWA's research substantiate the hypothesis that an improved safety rating is associated with a reduced accident frequency or rate?

ANSWER: Yes, to the extent that the study referred to above is representative of the motor carrier population.

SENATOR LAUTENBERG: How does your research budget relate to the last two questions?

ANSWER: FHWA has not requested funds to address this issue.

SENATOR LAUTENBERG: Is more research on these essential topics needed?

ANSWER: FHWA is considering the need to conduct this type of research in the next few years.

NATIONAL MOTOR CARRIER ADVISORY COMMITTEE

SENATOR LAUTENBERG: How does FHWA ensure that there is adequate representation on the National Motor Carrier Advisory Committee from safety organizations and public interest groups?

ANSWER: FHWA periodically reviews representation on the committee to ensure that safety organizations and public interest groups are appropriately represented. Further, meeting notices are published in the Federal Register and meetings are open to the public.

SENATOR LAUTENBERG: Should the Committee have official or ex-officio representation from the National Safety Council, the Transportation Research Board, or Advocates for Highway and Auto Safety? What other groups could or should be represented on this advisory Committee to broaden its representation?

ANSWER: The charter provides for a maximum of 25 members. There is a broad cross section of interests on the committee.

SENATOR LAUTENBERG: Is there any evidence to substantiate the assertion that commercial-oriented interests are highly represented on the Committee?

ANSWER: There is a proper balance among the diverse segments of the truck and bus industry as well as public interests groups.

SENATOR LAUTENBERG: List the members on the Committee and their affiliations.

ANSWER: The Secretary is in the process of selecting committee members for 1990 and 1992. The members and their affiliations for 1988 to 1990 are listed below:

Jacob F. Alexander
Deputy Secretary
North Carolina Department of Transportation

John M. Allen
Former Member
Arkansas Transportation Commission

Frank E. Barnett
Attorney
Bake, Worthington, Crossby,
Stansberry & Woolf

Lana R. Batts
Senior Vice President for Government Affairs
American Trucking Associations

Joseph M. Clapp
Chairman and President
Roadway Services, Inc.

Ralph V. Durham
International Vice President and Director
Safety and Health Department
International Brotherhood of Teamsters

William E. Farrell
Truck Owner-Operator and Montana State Legislator

Christopher K. Gleason
President
The Gleason Financial Group

Peter Griskivich
Vice President and Director
Motor Truck Manufacturers Division
Motor Vehicle Manufacturers Association

Maurice J. Hannigan
Commissioner
California Highway Patrol

James J. Johnston
President
Owner-Operators Independent Drivers Association

Theodore C. Knappen
Senior Vice President
Greyhound Lines

Edward E. Kynaston
President
Professional Truck Driver Institute of America

Robert A. Leibold
President-Business Insurance
Allstate Insurance Company

John R. Leopold
Maryland State Legislator

Charles G. McDaniel
President
Hilldrup Moving & Storage Company

Jay G. Sasall
President
New Beckley Mining Corporation

Thomas C. Schumacher
Executive Vice President
California Trucking Association

Norman R. Sherlock
Former Consultant
American Bus Association

Wayne J. Smith
Executive Director
United Bus Owners of America

Thomas R. Swennes
Vice President & General Manager
Port Service Company

Ben J. Tyler
President
Burlington Industries Transportation Division

George A. Viverette
Director of Highway Transportation
American Automobile Association

Don A. Wilson
Principal
The Wilson Group

Kenneth G. Younger
Vice Chairman
Carolina Freight Corp.

LIAISONS

Martin Fitzpatrick
Administrator, Office of Transportation
U.S. Department of Agriculture

David Konschnik
Office of the Chairman
Interstate Commerce Commission

PUBLIC EDUCATION PROGRAMS

SENATOR LAUTENBERG: In Senate Report 101-121, the Committee strongly encouraged FHWA to set up an education program designed to inform the motoring public how to share the road with the commercial motor carrier industry.

What has FHWA done to implement this request, what are future plans, what costs are involved, and how are you coordinating your efforts with groups outside of FHWA?

ANSWER: On April 7, 1989, FHWA entered into a $1 million grant agreement with the New Jersey Office of Highway Traffic Safety to conduct a truck safety project to reduce the accident rate of trucks through increased enforcement and statewide public education regarding trucks. A major component of the project is a comprehensive public information campaign which includes the dissemination of a truck safety video, brochures for automobiles and commercial motor vehicle drivers, and bumper stickers to inform the public about truck safety. The materials will be made available for use by other States.

The FHWA has coordinated with the National Highway Traffic Safety Administration on these activities and will continue to do so in the future.

Private organizations, such as the American Trucking Associations (ATA) and the Highway Users Federation, have developed similar public education materials about driving safely with trucks. The ATA has published pamphlets instructing motorists and truck drivers on how to avoid accidents. Both organizations have produced videotapes on this subject.

SENATOR LAUTENBERG: How does your FY 1991 request reflect the Committee's interest in this area?

ANSWER: No additional funding has been requested for this area. The objective to make educational materials available to the public can be accomplished under the current funding request.

SENATOR LAUTENBERG: What data exists on the approximate percentage of accidents involving commercial motor vehicles that are primarily caused by the motoring public versus that caused by a commercial driver? (Please cite various percentages from different studies on this subject.)

ANSWER: Statistical data are not available on the percentage of accidents involving commercial motor vehicles that are primarily caused by the motoring public versus that caused by a commercial driver. However, according to accident statistics, medium and heavy trucks have an accident rate of 250 accidents per 100 million miles of travel compared to 340 for all vehicles.

SAFETYNET

SENATOR LAUTENBERG: How many States are presently participating in the SAFETYNET system? How is FHWA encouraging states to input data into the data base?

ANSWER: Forty-three States are participating in the SAFETYNET Inspection module. Four States are participating in the SAFETYNET Accident module. FHWA encourages States to input data into the data base by: (1) promoting its usefulness to State managers as a tool for managing their motor carrier safety programs; (2) demonstrating the usefulness of the carrier profile report which consolidates individual carrier data from all States into one report; and (3) demonstrating the benefits of sharing data.

SENATOR LAUTENBERG: By what date will the SAFETYNET accident and roadside inspection modules be fully functioning and accessible by and to both FHWA and all of the states?

ANSWER: It is now accessible to all States. Four states are currently entering and transmitting accident data to FHWA. A recent survey indicated that about 12 States are planning to use the SAFETYNET accident module beginning this fall.

SENATOR LAUTENBERG: What are the total costs in FY 1990 and FY 1991 associated with SAFETYNET?

ANSWER: The FY 1990 funding for SAFETYNET is $272,000 and that requested for FY 1991 is $435,000.

SENATOR LAUTENBERG: Has your information system advanced to the point where you use roadside inspection data and accident data to determine a priority list for more selective safety reviews?

ANSWER: SAFETYNET data are used by headquarters and field staff to review the inspections and of out-of-service violations to help prioritize carriers for safety reviews.

SENATOR LAUTENBERG: What specific funding requests in your FY 1991 budget have you made that will fund the generation of improved carrier priority lists using SAFETYNET data?

ANSWER: Funding for the generation of improved carrier priority lists is included in the request for systems support in the FY 1991 budget.

SENATOR LAUTENBERG: Please specify the number of States that are not regularly submitting inspection data into SAFETYNET.

ANSWER: Currently, 12 States are not regularly submitting inspection data.

SENATOR LAUTENBERG: How many states are not submitting accident and audit data into SAFETYNET?

ANSWER: Forty-six States are not submitting accident data into SAFETYNET, although FHWA expects that about 12 will be submitting data by October 1990. The SAFETYNET safety review (audit) module is still under development.

SENATOR LAUTENBERG: Does FHWA require the submittal of these data?

ANSWER: It is FHWA's policy that States should routinely submit driver and vehicle inspection data.

SENATOR LAUTENBERG: If not, why isn't this a requirement for receiving MCSAP funds?

ANSWER: Failure to routinely submit driver and vehicle inspection data could result in loss of MCSAP funds.

SENATOR LAUTENBERG: How does FHWA use SAFETYNET data for prioritizing carriers in need of a safety review?

ANSWER: Safety inspection data are reviewed to identify carriers whose drivers or vehicles continue to fail roadside inspections. FHWA uses this information to prioritize carriers for safety reviews.

SENATOR LAUTENBERG: How does SAFETYNET data affect priority lists for ETA and SCE?

ANSWER: The number of inspections and percent of out of service violations obtained from the SAFETYNET roadside inspection data are used to develop priority lists for ETA and SCE.

Operation Lifesaver

SENATOR LAUTENBERG: The FHWA annually provides more than a hundred million dollars for construction and engineering work on public highway-rail grade crossings. However, the FHWA and FRA only provides annually hundreds of thousands of dollars for public education about highway-rail grade crossing safety.

- What is the cost-effectiveness of these different approaches to promoting safety?

ANSWER: The FHWA's "1989 Annual Report on Highway Safety Improvement Programs" states that the benefit-to-cost ratio for highway-rail crossing safety improvement projects was 2.0. The ratio for warning device projects was between 2.1 and 2.8. The report states "The Rail-Highway Crossings program continues to show the greatest percentage of accident reductions. Fatal, injury, and fatal-plus-injury accidents have been reduced by 89, 63, and 67 percent, respectively.....Evaluated improvements under the Rail-Highways Crossings program indicate the program has prevented over 5,000 fatalities and 20,000 injuries."

Similar objective measures are not currently available for Operation Lifesaver (OL). The measure of accomplishment of Operation Lifesaver, Inc.'s (OLI) activities can be determined from the day-to-day tasks of producing and distributing materials, coordinating programs and requests for assistance, and representing OL and delivering the 3E message--education, engineering and enforcement.

SENATOR LAUTENBERG: Does DOT support of education-oriented activities need to be made a more equal partner, especially in view of the fact that a substantial percentage of fatalities occur at crossings with active warning devices?

ANSWER: Most programs can benefit from additional funds, including OL. The relative fiscal support cited above, hundreds of millions versus hundreds of thousands, is correct. Significantly changing this would adversely impact the engineering and warning device program and at the same time overwhelm the OLI's capability to deliver services. This would be out of proportion to the overall highway-rail crossings problem.

SENATOR LAUTENBERG: Does Federal support of OL need to be increased?

ANSWER: Some increase in support to OL and to OLI could be beneficial; however, other funding sources should be considered.

SENATOR LAUTENBERG: Because the number of deaths, injuries, and accidents occurring at public highway-rail grade crossings involving motor vehicles increased from 1987 to 1988, does this suggest the need for additional educational-type activities through OL?

ANSWER: Continued targeting and selectivity in the delivery of current programs and activities is needed to identify and correct problem rail-highway crossings through the 3E process. Although accidents went down slightly in 1989, fatalities and injuries both increased. State and local program coordinators are considering the need to refine and target OL activities. For example, specific locales and population subgroups are being considered for increased activity. OL advocates across the country are aware of these statistical trends and are reacting with increased effort.

SENATOR LAUTENBERG: How does the FY 1991 request reflect concern for grade-crossing accidents? How is OL trying to increase private support for its activities?

ANSWER: FHWA's FY 1991 budget request will provide funds necessary to continue the programs that provide support to OLI and continuation of training and promotional efforts.

SENATOR LAUTENBERG: We understand that the demand for training of law enforcement officers regarding grade crossing safety far exceeds the ability of OL to service this demand.

- Will OL's train-the-trainer efforts be sufficient?

ANSWER: Fundings for this OL activity are provided through a FRA grant to OL. We believe that FRA is in the best position to provide answer to the question.

SENATOR LAUTENBERG: What are OL, FHWA, and FRA doing to improve the communications interface between railroad and traffic engineers regarding highway-rail safety?

ANSWER: The concept of open communication regarding rail-highway safety has been constantly stressed throughout the FHWA. FHWA field offices are participating with State engineers and railroad personnel in final inspections, safety reviews, and multidisciplinary reviews on rail-highway crossing projects.

The FHWA Region 3 Office has held annual Federal-State-Railroad Workshop since 1981. The workshop usually includes participants from Federal agencies, State highway departments, State regulatory agencies, consultants, material suppliers, the Association of American Railroads (AAR), Rail Progress Institute (RPI), and railroads. The purposes of the workshop are to provide an opportunity for an exchange of ideas, update of information, resolution of differences, and improved coordination concerning rail-highway crossings program.

In March and May of 1990, FHWA Regions 4 and 5/7 held their first annual Federal-State-Railroad workshop.

The FHWA will:

1. Provide technical assistance to OLI in carrying out the FHWA's grant ($250,000/year for 4 years) program.

2. Participate in the planning and promotion of National Highway-Railroad Conference.
3. Provide field offices with information on new and innovative program and techniques.
4. Be involved in railroad workshops, OLI symposiums and meetings.

Rail-Highway Crossings

SENATOR LAUTENBERG: In the FHWA's report entitled "Rail-Highway Crossings Study," the following was recommended:

Promotion and implementation of research and development directed toward:

- Technological advances in warning devices.
- Human factors aspects of rail-highway crossing safety.
- Accident causes due to physical and environmental factors.

• Please describe on a project-by-project basis how FHWA's FY 1990 and FY 1991 budget responds to this recommendation.

ANSWER: During the past 20 years, FHWA has conducted many research projects on rail-highway crossing safety. The research results have been incorporated into project procedures, device specifications, or other applications. Currently FHWA has no rail-highway crossing research underway. FHWA R&D funds are quite limited and competitive and are committed to projects that are in the most need of research. The FHWA is encouraging State highway agencies to conduct research in the rail-highway area.

SENATOR LAUTENBERG: In the "Rail-Highway Crossings Study" submitted to Congress, the following recommendation was presented:

Promotion and continuation of rail-highway crossing safety public information and education efforts to:

- encourage driver awareness.
- provide training for involved public agency and railroad personnel
- increase cooperative efforts between state, county, and law enforcement agencies and railroads.

• How does the FHWA and FRA budgets for FY 1990 and FY 1991 respond to this recommendation?

ANSWER: To encourage driver awareness, FHWA will continue to support and participate in OL's various activities. $261,739.00 has been obligated for FY 1990 to continue the third year of the Cooperative Agreement with OLI. Portions of the funds will be used on promotional, education and awareness campaigns such as distributions of OL label pins, pamphlets, radio and TV PSA's, promoting national OL week and other OL events. The FHWA will obligate the remaining $262,933.00 in FY 1991 to carry out Section 339 of Public Law 100-202 in the 1988 Appropriation Act.

To provide training for involved public agency and railroad personal, the FHWA is offering a training course titled "Railroad-Highway Grade Crossing Improvement Program" to agencies that request it. As of May 1990, 24 training courses have been presented in 16 States with participants from FHWA, State highway agencies, State regulatory agencies, consultants, local agencies and railroads. FHWA is currently working on the continuation of the contract for FY 1991.

To increase cooperation efforts between highway and law enforcement agencies and the railroads, FHWA participated in the USDOT sponsored Traffic Safety Summit held in April 1990. The Summit was well represented by law enforcement agencies all over the country. As a result of the Summit, several important recommendations were made regarding rail-highway crossings safety. In June 1990, FHWA will host a safety symposium in which highway safety and enforcement experts from local, State, and federal agencies will participate in order to identify short-term accident countermeasures and develop implementation plans. In FY 1991, FHWA will continue to support OL's many activities (e.g., trooper on the train), which enhance the interactions between law enforcement agencies and railroads.

SENATOR LAUTENBERG: Why hasn't the request for OL activities increased in recent years?

ANSWER: Section 130 funds are limited and are apportioned to each State by legislative formulas. In using these funds, each State identifies, sets priorities, and implements rail-highway improvements considered to be the most cost-effective. Therefore, FHWA has little discretion as to what areas/programs the safety funds should be allocated. In addition, with limited resources, FHWA has to administer these safety programs in the most effective manner. The OL activities play a role and has an impact in rail-highway crossing safety. However, the success of OL is difficult to quantify. FHWA's Cooperative Agreement requires an impact evaluation to be conducted during 1990. The purpose of the impact evaluation is to determine the effectiveness of the OL program. The results of the impact evaluation may provide an indication on whether any modifications in the current priority format may be necessary.

TOLL FINANCING

SENATOR LAUTENBERG: What is the status of the toll financing pilot program?

ANSWER: Six (Texas, Georgia, Pennsylvania, Florida, Delaware and West Virginia) of the nine States in the program have submitted information on specific routes. South Carolina, Colorado and Orange County, California have responded but have not defined their choice of routes. Toll agreements have been executed with Georgia, Pennsylvania and Delaware and construction is underway in these States. Florida has hired a consultant to perform environmental and engineering studies on its project. Texas and West Virginia have selected their routes, but State and local agreements must be made before the projects can advance.

SENATOR LAUTENBERG: What, if any, major problems are being encountered in constructing these toll facilities?

ANSWER: Construction is underway in Pennsylvania, Delaware and Georgia. Construction on the remaining toll facilities cannot start until the States and local toll authorities agree on the financial breakdown for these routes and toll agreements can be prepared and sent to the FHWA for execution. In Colorado, South Carolina, and California, State and/or local officials first must agree on the selection of the pilot toll facilities.

SENATOR LAUTENBERG: Tolls cannot be placed on highways constructed with Federal-aid funds except for a few special conditions. A provision permitting Federal-aid financing of toll highways for seven facilities as a pilot program was authorized in 1987. The number of facilities was increased to nine through the Department of Transportation's FY 1988 and FY 1989 appropriations acts.

SENATOR LAUTENBERG: Are projected toll revenues sufficient to cover the States' 65 percent share of construction costs?

ANSWER: The States believe the toll revenues from these pilot projects will be sufficient to pay for retirement of the bonds issued for the State's share of the construction, the interest to be paid on those bonds, and the maintenance and operation costs on these pilot projects.

SENATOR LAUTENBERG: If the use of tolls on Federal-aid highways is expanded, should toll projects be allowed only under certain conditions, such as to relieve congestion or to expand economic development? If restrictions are imposed, will regulations or guidelines be needed to ensure that States comply?

ANSWER: If the use of tolls on Federal-aid highways were to be expanded, we do not believe specific conditions such as relief of congestion, increased economic development, or other Federal criteria should be required as to which highway projects could be selected to be toll facilities. Judgements as to which projects should be toll facilities should be left to the States. The

States should have to meet only the criteria for regular Federal-aid highway projects.

BLOCK GRANT DEMONSTRATION

SENATOR LAUTENBERG: What benefits have states reported from the demonstration to date?

ANSWER: Although the amount of time operating under the Combined Road Plan (CRP) demonstration has been limited in some of the 5 demonstration states, experiences to date have been very favorable. The most cited benefit has been the flexibility provided the States by the pooling of funds. In addition there have been reductions in paper work for both the States and the FHWA. Another identified benefit has been the ability of States to perform more timely project closeouts since the FHWA no longer has to perform final construction inspections.

SENATOR LAUTENBERG: What efforts is FHWA making now to assess states' experiences with the demonstration?

ANSWER: The FHWA is assessing the States' experiences through a program of field office conducted process reviews of the major CRP provisions and overall program reviews by FHWA Headquarters' personnel. In addition, the States are providing data, including annual reports on implementation of the CRP; and, for the interim report to Congress, we specifically requested that the States give us their views on their experiences so we could include this information in the report. Also, we have been cooperating with the Government Accounting Office in its review of the CRP.

SENATOR LAUTENBERG: What efforts are being made by FHWA to ensure that safety is not being jeopardized by states when making design exception decisions or conducting final inspections?

ANSWER: Each CRP State has internal procedures for review and approval of exceptions to design standard and for conducting final inspections. As part of its monitoring activities each FHWA Division Office will conduct reviews of these aspects of the demonstration to determine if the agreed to procedures are being followed and will ensure that any necessary corrective actions are taken. It should be pointed out that several of the CRP States indicated that they expect to be more conservative in approving design exceptions since, under the CRP, they feel they have more responsibility for any resulting problems.

SENATOR LAUTENBERG: To what extent will the results of this demonstration program affect recommendations for future federal/state roles in administering the federal-aid program?

ANSWER: At this early stage, some benefits of the CRP program have already become clear and areas have been identified where more flexibility could be provided to the States. In view of this, a program providing greater flexibility for State/local decision-making that reflects experience to date with the demonstration is being considered in proposed legislation for use in the administration of a portion of the post-1991 Federal-aid highway program.

SENATOR LAUTENBERG: Currently, the Combined Road Plan gives states responsibility for approving design exceptions and final inspections. What additional responsibilities do you anticipate might be transferred to the states?

ANSWER: In developing proposed legislation for a program providing greater flexibility for State/local decision-making, consideration is being given to expansion of the States' authority and responsibility in addressing non-Title 23 statutory requirements such as the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and NEPA. This would be consistent with recommendations made by States involved in the CRP; however, at this point no decisions have been made. In addition, the FHWA currently keeps fairly detailed fiscal records on all projects. In a post-Interstate State/local program, we would anticipate that project level records would be kept by the States and that the records would be available for Federal review and audit. Therefore, much less detailed records would be kept at the Federal level.

SENATOR LAUTENBERG: Currently, the program affects funds eligible for secondary, urban, and some bridge systems. Do you anticipate expansion to include additional federal-aid systems.

ANSWER: The CRP demonstration enabling legislation specifically allowed the "pooling" of Federal-aid secondary (FAS), Federal-aid urban (FAU), and Highway Bridge Replacement and Rehabilitation Program (HBRRP) funds for use on the FAS and FAU systems and for off-system bridge projects. At the request of some of the CRP States, the FHWA determined that certain additional funds used for the same purposes could be administered under CRP procedures: Interstate substitution (ISUB) funds, minimum allocation (MA) funds, and minimum apportionment funds for Interstate construction (MA-IC). However, these funds retained their identity and cannot be included in the CRP pool. Most of the CRP States feel that the CRP pool should include all funds that can be used on systems and projects covered by the demonstration. The current restrictions force the States to use different administrative procedures for similar projects on the same facilities, depending on whether CRP funds or funds from another category, such as safety are used.

Two of the major points of the National Transportation Policy (NTP) are (1) to focus Federal transportation resources on facilities of national significance and (2) to move to more flexible Federal funding. Although we intend to focus Federal funding on highways of national significance, we still intend to provide funds for the lower order highway systems. Use of a program providing greater flexibility for State/local decision-making for funds provided for highways not on a system of highways of national significance is consistent with the NTP and is being considered in the development of our legislative proposal. In terms of the present Federal-aid systems, it is likely that a system of highways of national significance would not include all of the highways presently on the Federal-aid primary system and in that sense the CRP approach may be expanded to include some highways currently on the primary system.

SENATOR LAUTENBERG: What, if any legislative responsibilities, such as NEPA, Davis-Bacon, DBE, etc. are being considered for state administration? What information exists to show how state laws compare to federal laws in these areas?

ANSWER: As noted above, consideration is being given to expansion of the States' authority and responsibility in addressing non-Title 23 statutory requirements such as the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and NEPA. Many states have documented procedures for implementing similar state legislative responsibilities. However, regardless of a State's own laws, we anticipate requiring the States to comply with all applicable Federal laws and regulations.

SENATOR LAUTENBERG: Which states have been participating, and for how long?

ANSWER: The five States participating in the demonstration and the dates of execution of their agreements are: Minnesota, October 1, 1987; Texas, January 25, 1988; Rhode Island, November 1, 1988; New York, December 1, 1988; and California, May 30, 1989. Minnesota, Rhode Island and New York are three of the four States cited for participation in the conference report. The fifth State chosen was Texas. California replaced Virginia, the fourth cited State, after Virginia declined to participate.

SENATOR LAUTENBERG: Has this participation affected their spending decisions? How?

ANSWER: In general, the CRP has not affected the types of projects being implemented by the demonstration States. However, it has allowed the States to better manage their resources and project schedules since they can fund specific projects without having to wait for the accumulation of sufficient categorical funds.

HIGHWAY FUEL TAX EVASION

SENATOR LAUTENBERG: The estimated costs of highway fuel tax evasion to the Highway Trust Fund are in excess of $1 billion annually. An additional estimated revenue loss of $0.5 billion is associated with diesel fuel tax evasion each year. FHWA is beginning a $0.5 million project which will experiment with coordinating FHWA, States, and IRS efforts to recoup highway use taxes lost through evasion. You are planning to initiate the projects with 3 States, and are asking for $2 million in the FY 1991 budget for this purpose.

SENATOR LAUTENBERG: What is the status of this project? What agreements have been reached? What States will be involved?

ANSWER: The FHWA has been working with the Internal Revenue Service (IRS) and tax enforcement personnel from several States to reach agreement on the direction the project should take. One of the early agreements included in our implementation plan is that the fuel tax compliance project should be a multi-year project that will allow IRS and the States to make a long-term commitment of staff resources to the project. In the initial stages of the project, three States will be identified as lead States (most likely Indiana, New Jersey and Texas). These States, other participating States surrounding the lead States, and the IRS District Offices in the lead States will set up Joint Federal/State fuel tax compliance task forces to improve taxpayer audit coverage and to facilitate special investigation efforts.

The efforts of these task forces will be designed to increase enforcement of both Federal and State highway excise tax laws, with emphasis on the motor fuel taxes. Our plan calls for expansion of the project over a 5-year period, until, in FY 1995, all States where a need is shown to exist are covered by the project. A project of national scope could potentially involve eight lead States and IRS district offices in the lead States. The estimated project cost over the 5-year period totals $32 million. We are now very close to signing a reimbursable agreement with the IRS to fund the activities of these task forces as well as to provide funds to assist the IRS in the development of a computerized data base that will allow quick retrieval of information on tax-free transfer registrations. We have established a steering committee that will be composed of executives of the FHWA, the IRS, and lead State revenue agencies to oversee project activities. We will be meeting with the State agencies over the next few months to sign agreements to fund their participation in carrying out the activities of the joint Federal/State task forces.

SENATOR LAUTENBERG: What effects will the results of this study have on future policy?

ANSWER: We will be monitoring project activities continually over the 5-year implementation period to ensure that the funding of this project is a productive use of Highway Trust Fund revenues. At the end of the 5-year period the need for a continuation of the expanded motor fuel tax compliance effort will be evaluated, and a decision will be made as to whether the project should become a permanent function of the IRS, with additional staff costs paid for either with HTF monies, or with a specific line item in the IRS budget.

SENATOR LAUTENBERG: What efforts are being made to assess the impacts of fuel tax evasion on Trust Fund revenues? What impact do these effects have on the Federal highway program?

ANSWER: The Department of the Treasury has responsibility for revenue collection and, therefore, for assessing the impacts of motor fuel tax evasion. However, we have seen information provided in testimony before Congress and provided by State fuel tax officials, that evasion of fuel taxes may range from the conservative estimates of Treasury at $450 million per year to as much as $1.0 billion per year. We believe that recent changes in the point-of-collection of the motor fuel taxes have laid the groundwork for improved enforcement of the motor fuel tax laws by reducing the number of taxpayers that the IRS has to monitor. Despite these changes, however, we continue to be concerned about evasion of the motor fuel taxes. There have been recent indications from Federal and State fuel tax investigators that new tax evasion schemes are emerging from tax-free transfers at major terminals. We understand that investigations are going on in the New York/New Jersey area again and in Houston. In recent testimony, the IRS stated that evidence indicates that criminal tax evasion continues under the new law, although the scope of this noncompliance cannot be accurately measured. Whether the actual amount of revenue lost is $450 million per year or $1.0 billion per year, the loss is substantial and the Highway Trust Fund is losing massive amounts of revenue that should be going to road and bridge construction.

SENATOR LAUTENBERG: What efforts have been made by DOT to reduce gas tax evasion? What, if any, changes are needed in DOT's role or authority to recover revenues lost to the Trust Fund due to tax evasion? How does the fact that fuel tax revenues are earmarked specifically for the Trust Fund affect FHWA's interest on ensuring that evasion of these taxes does not occur?

ANSWER: Our efforts have been directed toward (1) supporting the legislation that moved the point of taxation to an earlier point in the distribution chain, and (2) increasing emphasis on motor fuel tax compliance activities by providing the resources needed by the IRS and State revenue agencies to carry out special compliance efforts. The IRS is, of course, the Federal agency with the responsibility for tax enforcement and our role is simply that of providing support to their enforcement efforts. We do not require any change in legislative authority to carry out this role. We have the authority to use a percentage of the Highway Trust Fund for administrative purposes. We interpret this to include the transfer of funds from the Highway Trust Fund to reimburse the IRS and the States for the costs of highway user-tax compliance activities carried out as a result of this project. Our interest is to ensure that the taxes that highway users pay to support the Federal-aid highway program are used for the purposes intended by the Congress.

SENATOR LAUTENBERG: What, if any, lessons can be learned from other countries' efforts to curtail such evasion? What efforts have been made to consider other countries' efforts as a means for reducing evasion in this country?

ANSWER: Because there are likely to be many differences between our tax laws and collection procedures and those of other nations, experiences may not always be fully transferable. We have not studied the experiences of other nations to any great extent, but we do know that several countries, including most Canadian provinces, have used fuel coloration to facilitate compliance with diesel fuel taxes. Tax officials from Quebec and Ontario believe that coloration programs in their provinces have been highly effective. While we have not carried out research in this area, we believe it would be helpful to U.S. tax enforcement agencies if more was known about fuel coloration and other tax compliance mechanisms used in other nations.

SENATOR LAUTENBERG: For the $2 million requested in FY 1991, what is the estimated return in increased revenue collection?

ANSWER: By allowing the IRS to place greater emphasis on fuel tax enforcement efforts, the funds we are transferring to the IRS will do much to reduce the loss of highway revenue attributable to fuel tax evasion. Past compliance efforts have shown significant gains relative to the resources expended in enforcement. For instance, the IRS spent $800,000 to conduct diesel fuel tax examinations in FY 1986, and the yield in additional taxes and penalties amounted to over $20 million, or a return of $25 for every dollar spent. In a similar joint Federal/State gasoline tax enforcement project, audits of 38 taxpayers yielded over $11 million, or an average of nearly $300,000 per taxpayer. As a result of a joint Federal/State motor fuel tax enforcement project in 1985-86, audits of just 25 diesel fuel taxpayers in 5 States resulted in additional tax and penalties totaling nearly $2 million, or an average of $80,000 per taxpayer audited. Information provided by a State revenue agency shows that, for the period between January, 1987 and February, 1990, 92 gasoline tax audits found an average of $600,000 in tax deficiencies per audit. Approximately the same average deficiency was found in 137 diesel fuel audits.

These figures indicate that there is much to be gained by curtailing noncompliance with the highway tax laws. The actual amount of revenue to be gained is much more difficult to estimate, since there may be cases where a deficiency is found, but the revenue is never recovered. Or, tax deficiencies may be paid, but it may take several years between the time an audit or investigation takes place and the time a case is settled and a penalty assessed. Further benefits will result from putting criminals engaged in tax evasion out of business, thus eliminating a major drain on needed highway dollars. In addition, the very fact that the Federal and State governments are placing more emphasis on highway tax compliance will give taxpayers the message that any attempts to illegally avoid payment of highway excise taxes will be more likely to be caught.

BRIDGES

SENATOR LAUTENBERG: What changes are needed to enable the federal bridge program to be more responsive to diverse system and state needs?

ANSWER: There is a need to reconsider the use of sufficiency ratings as a factor in establishing the eligibility of bridges for the bridge program. While the sufficiency rating has served well as a tool for ranking bridge needs on a national basis, it has shortcomings including a relative lack of sensitivity to the functional class of highway on which a bridge is located. The FHWA favors a method for potential HBRRP eligibility that would be based on required levels of service. This would involve comparing existing bridge characteristics with target values (levels-of-service values) that vary relative to the functional classes of highways.

SENATOR LAUTENBERG: What accounts for the increase in deficient bridges on the federal-aid system? The decrease in deficient off-system bridges?

ANSWER: A major factor in the increase in deficient bridges is the aging of Interstate bridges. There was a high level of bridge construction activity beginning in the mid 1950's, throughout the 1960's and early 1970's. Most of the Interstate bridge construction was done in this time frame. These bridges which are now between 15 and 35 years old, are at the age where they are requiring stepped-up maintenance and rehabilitation, and even replacement. The decrease in deficient off-system bridges is attributable to the increased level of rehabilitation and replacement activity.

SENATOR LAUTENBERG: What progress can we expect to make in repairing our deficient bridges given current federal bridge funding levels?

ANSWER: At the current funding level, progress should be slower than in the past mainly because of the growing deficiencies in the more costly Federal-aid system bridges. Projections show that a funding level in excess of $4 billion per year may be needed to maintain the same cost estimate of backlog and projected needs.

There has been progress. Since the beginning of the HBRRP in FY 1979, 30,916 bridges were improved (17,206 were on the Federal-aid system and 13,710 were off-system). Had it not been for the HBRRP, Federal-aid system bridge deficiencies would be 93,083 instead of 75,877, or 23 percent additional. For the off-system, deficiencies would be 169,222 instead of 155,512, or 9 percent additional.

There are now about 15,000 fewer deficient bridges than when the program started. In that sense, there has been progress. However, it is again pointed out that the needs backlog in dollars has not been reduced as a result. The reason is that, on the average, there are more costly bridges in our deficient bridge population, (i.e. more Federal-aid system bridges and fewer off-system bridges).

The present annual expenditure by Federal and State governments for bridge replacement and rehabilitation improvements involving Federal-aid is approximately $2.5 billion. It is estimated an additional $1.0 billion is spent by State and local governments for non Federal-aid bridge improvements.

SENATOR LAUTENBERG: What is the outlook for deficient bridges on and off the federal-aid system in the next several years?

ANSWER: The outlook is for a change in the nature of deficient bridge needs. There is anticipated to be an increase in deficient bridges on the Federal-aid system with a concurrent decrease in deficient off-system bridges suggesting that the nature of our bridge needs is changing. Over the next two decades, deterioration of our large (and more costly) middle-aged bridge population will make up the majority of our needs accrual.

Over the past several years, the FHWA had estimated that it would cost about $50 billion to eliminate the backlog of deficient and obsolete bridges that are eligible for the HBRRP. We considered that estimate to be reasonable although it did not take into account future deterioration needs.

The FHWA estimates the investment requirements by all units of government to eliminate all existing and accruing deficiencies by the year 2005 to be $93 billion.

BRIDGES ALREADY BEGUN

SENATOR LAUTENBERG: Provide a listing of Federal funds needed to complete projects already begun.

ANSWER: In the HBRRP discretionary bridge program, the funds needed to complete projects already begun are:

FEDERAL FUNDS NEEDED TO COMPLETE PROJECTS ALREADY BEGUN

1.	Franklin Street	IL	$ 25.0 million
2.	Clark (US 67)	IL/MO	28.0
3.	Burlington	IA/IL	1.0
4.	Million Dollar	ME	82.0
5.	Brooklyn	NY	20.0
6.	Queensboro	NY	32.0
7.	Manhattan	NY	66.0
8.	Jamestown	RI	7.0
		Total	$261.0 million

SENATOR LAUTENBERG: List by State the estimated costs to rehabilitate or replace deficient bridges eligible for the HBRRP.

ANSWER: The estimated costs are:

BRIDGE REPLACEMENT AND REHABILITATION

State	Cost (in thousands)	State	Cost (in thousands)
ALABAMA	$ 1,017,819	ALASKA	$ 37,418
ARIZONA	66,216	ARKANSAS	600,224
CALIFORNIA	1,523,144	COLORADO	522,020
CONNECTICUT	2,131,642	DELAWARE	110,310
DIST. OF COL.	287,113	FLORIDA	878,670
GEORGIA	1,206,186	HAWAII	119,709
IDAHO	109,414	ILLINOIS	1,246,962
INDIANA	781,654	IOWA	906,676
KANSAS	1,146,111	KENTUCKY	1,010,808
LOUISIANA	1,136,659	MAINE	207,986
MARYLAND	957,891	MASSACHUSETTS	1,804,712
MICHIGAN	800,093	MINNESOTA	544,331
MISSISSIPPI	813,502	MISSOURI	1,746,010
MONTANA	348,528	NEBRASKA	578,709
NEVADA	24,260	NEW HAMPSHIRE	258,288
NEW JERSEY	2,128,760	NEW MEXICO	166,774
NEW YORK	10,662,192	NORTH CAROLINA	1,866,061
NORTH DAKOTA	201,074	OHIO	1,367,432
OKLAHOMA	1,197,740	OREGON	283,240
PENNSYLVANIA	3,141,702	RHODE ISLAND	69,941
SOUTH CAROLINA	370,614	SOUTH DAKOTA	238,240
TENNESSEE	1,394,118	TEXAS	1,913,780
UTAH	62,967	VERMONT	227,566
VIRGINIA	844,218	WASHINGTON	991,232
WEST VIRGINIA	1,208,597	WISCONSIN	930,691
WYOMING	86,043	PUERTO RICO	122,151

NATIONAL TOTAL - $52,398 Million or $52.4 Billion

SENATOR LAUTENBERG: List by State and project the amount of discretionary funds released by the Secretary in fiscal years 1987, 1988, 1989 and to date in fiscal year 1990. Also provide each bridge project's rating factor.

ANSWER: The following tables list the information for the four fiscal years:

DISCRETIONARY BRIDGE PROGRAM

FUNDED PROJECTS FY 1987

Bridge Name	State	Discretionary Bridge Funds Received in FY 1987	Rating Factor
W. B. Crumpton	AL	$ 10,590,000.00	5.90
Little Colorado	AZ	6,480,000.00	23.71
Fisherman's Channel	CA	10,720,000.00	.91
Speer Blvd	CO	5,700,000.00	.73
Port Orange	FL	8,160,000.00	27.47
Burlington	IL	150,000.00	*
Franklin Street	IL	190,000.00	*

Bridge Name	State	Discretionary Bridge Funds Received in FY 1987	Rating Factor
Staley Viaduct	IL	23,410,000.00	2.85
Burlington	IA	1,319,000.00	*
Keokuk	IA	400,000.00	*
Wabasha	MN	3,249,675.00	3.41
ASB	MO	2,114,944.73	*
W. Pennway	MO	4,620,000.00	1.48
Notre Dame	NH	2,433,650.99	6.43
Rt 40/In. Thor	NJ	12,700,000.00	14.24
Manhattan	NY	10,800,000.00	*
University Heights	NY	10,400,000.00	2.92
Alsea Bay	OR	20,000,000.00	8.88
Walnut Street	PA	20,040,000.00	12.66
Jamestown	RI	2,000,000.00	*
James Island	SC	21,169,750.00	*
Karnes	TN	10,100,000.00	6.16
Old Williamstown	WV	4,000,000.00	6.52
Wabasha	WI	3,335,000.00	3.41
	Total	$194,082,020.72	

* Project was selected for initial funding prior to the effective date of the rating factor criteria.

FUNDED PROJECTS FY 1988

Bridge Name	State	Discretionary Bridge Funds Received in FY 1988	Rating Factor
W.R. King	AL	$ 13,443,120.00	3.91
Potato Slough	CA	15,160,000.00	5.95
Speer Blvd	CO	11,539,200.00	.73
Niantic River	CN	19,338,320.00	4.29
Acosta #	FL	12,300,000.00	82.49
Wailoa	HA	4,400,000.00	1.00
MLK	IL	15,960,000.00	2.62
Franklin Street	IL	200,000.00	*
Staley Viaduct	IL	2,203,000.00	2.85
Burlington	IA	16,357,000.00	*
Natchez-Vidalia	MS	1,100,000.00	*
W. Pennway	MO	2,408,764.00	1.48
Nebraska City	NE	827,322.21	*
Wells Avenue	NV	12,080,000.00	6.47
Notre Dame	NH	10,000,000.00	6.43
Father Baker	NY	5,050,000.00	7.21
Girard & Belmont	PA	16,100,000.00	15.09
James Island	SC	61,939,400.00	*
Karnes	TN	1,518,000.00	6.16
	Total	$221,924,126.21	

Special Legislation

*Project was selected for initial funding prior to the effective date of the rating factor criteria.

FUNDED PROJECTS FY 1989

Bridge Name	State	Discretionary Bridge Funds Received in FY 1989	Rating Factor
Cochrane	AL	$ 2,346,558.00	*
Arroyo Seco	CA	12,696,000.00	5.88
Acosta #	FL	50,000,000.00	82.49
Franklin Street	IL	6,400,000.00	*
Dubuque Eagle Pt.	IA	23,671,000.00	*
Million Dollar	ME	8,240,000.00	*
Lake Street	MN	9,100,000.00	5.90
W. Pennway	MO	4,186,316.00	1.48
Notre Dame	NH	600,000.00	6.43
Father Baker	NY	21,120,000.00	7.21
Queensboro	NY	41,250,000.00	*
Main Avenue	OH	521,958.00	8.75
South Slough	OR	9,870,000.00	4.35
West End	PA	15,028,800.00	1.61
Old Williamstown	WV	15,200,000.00	6.52
	Total	$217,284,074.00	

Special Legislation

*Project was selected for initial funding prior to the effective date of the rating factor criteria.

FUNDED PROJECTS FY 1990 (TO DATE)

Bridge Name	State	Discretionary Bridge Funds Received in FY 1990	Rating Factor
Cochrane	AL	$ 12,056,300	*
Franklin St.	IL	10,792,000	*
Clark(US67)	IL	26,400,000	2.57
Burlington	IA/IL	30,180,000	*
Million Dollar	ME	8,400,000	*
SR115/MoR	MO	5,900,588	2.72
Grassy Sound	NJ	10,263,000	7.04
Brooklyn	NY	31,700,000	*
Manhattan	NY	5,520,000	*
Main Avenue	OH	38,878,000	8.75
Pasko Kennewick	WA	800,000	*
Old Williamstown	WV	1,500,000	6.52
Weirton Steuben.	WV	400,000	*
Sixth Street	WV	20,000,000	5.38
	Total	$202,789,888	

*Project was selected for initial funding prior to the effective date of the rating factor criteria.

SENATOR LAUTENBERG: In addition to listing the grants made, provide a listing by State of the request made to the Secretary for fiscal years 1987, 1988, 1989 and to date for fiscal year 1990. Include the rating factor, total project costs and the requested Federal funds.

ANSWER: The following are the listings for the four fiscal years of the discretionary bridge project requests:

UNFUNDED PROJECTS FY 87 REQUESTS

Rating Factor	Bridge Name	State	Total Project Cost	Federal-aid Funds Requested for FY 87
2.97	23rd St.Viad.	CO	$ 11,604,000	$ 8,640,000
3.01	Williamsburg	NY	290,600,000	48,560,000
3.53	W. R. King	AL	16,960,000	11,248,000
3.83	Sixth St	WV	27,000,000	2,000,000
6.22	So Slough	OR	11,800,000	160,000
7.63	Cheylan	WV	47,000,000	2,000,000
11.00	Girard/Belmt	PA	17,800,000	13,120,000
12.77	Founders	CN	19,600,000	5,000,000
17.54	Dan Ryan	IL	141,438,000	18,300,000
19.43	Bay St. Viad.	GA	11,160,000	48,000
20.15	Father Baker	NY	26,690,500	2,400,000
21.21	Rt1/9 SB/W.Yd	NJ	62,000,000	1,600,000
23.53	Rt147/Grasy S	NJ	42,500,000	32,000,000
23.85	US 84/Red R	LA	16,000,000	4,000,000
25.81	US 40/Mo R.	MO	23,200,000	5,300,000
45.72	Ouachita R	AR	10,232,000	800,000
52.23	Dickey Place	IN	14,805,000	11,844,000
53.59	US 30/Mo R.	NE	10,800,000	50,000
54.30	Sabine River	TX	15,000,000	12,000,000
54.80	Clark (Alton)	IL	71,000,000	1,000,000
56.18	Willow Slough	KN	17,510,000	8,000
60.75	US50/Nanticoke R	MD	41,303,750	33,043,000
60.93	Acosta	FL	111,165,000	4,600,000
78.68	Wash/Baum	NC	24,900,000	17,600,000
87.58	Charter Oak	CN	74,800,000	26,800,000
110.69	Baldwin	CN	154,500,000	2,000,000
123.06	Paris Landing	TN	39,954,000	31,963,200
563.18	Talmadge	GA	96,850,000	36,480,000

Note: The requests listed above in FY 87 are for construction or right-of-way. Preliminary engineering requests are no longer considered eligible by the FHWA for unfunded projects.

UNFUNDED PROJECTS FY 88 REQUESTS

Rating Factor	Bridge Name	State	Total Project Cost	Federal-aid Funds Requested for FY 88
2.89	Williamsburg	NY	$290,600,000.00	$47,400,000.00
5.42	"Q"	CN	14,000,000.00	11,200,000.00
6.94	South Slough	OR	11,800,000.00	160,000.00
11.28	Quachita River	AR	12,000,000.00	800,000.00

Rating Factor	Bridge Name	State	Total Project Cost	Federal-aid Funds Requested for FY 88
14.44	Jefferson St	TN	12,500,000.00	640,000.00
19.03	Bay St Viad	GA	10,700,000.00	8,600,000.00
19.07	Dan Ryan	IL	130,900,000.00	104,700,000.00
20.43	Dog River	AL	16,200,000.00	12,900,000.00
22.20	US 40/Mo. R.	MO	23,200,000.00	4,300,000.00
24.55	Rt 147/Grassy S	NJ	46,300,000.00	33,200,000.00
25.40	SR 858/ICWW	FL	10,500,000.00	660,000.00
27.34	US 30 (Blair)	NE	10,800,000.00	2,340,000.00
27.47	Lake Street	MN	17,600,000.00	14,080,000.00
29.09	South St Viad	NJ	14,200,000.00	400,000.00
33.21	Highlandview	FL	10,700,000.00	700,000.00
40.43	US63(Jeff City)	MO	36,200,000.00	9,200,000.00
48.15	Dickey Place	IN	14,700.000.00	11,300,000.00
51.71	IntracoastalWay	LA	27,500,000.00	4,100,000.00
54.10	US 50/Nanticoke	MD	35,200,000.00	28,200,000.00
56.24	Clark (US 67)	IL	71,000,000.00	8,260,000.00
57.62	US61/Homochitto	MS	10,300,000.00	8,200.000.00
61.51	Jekyll/Is.C'Way	GA	12,600,000.00	10,100,000.00
64.82	North Channel	NY	64,300,000.00	51,500,000.00
79.42	Willow Slough	KY	17,500,000.00	12,800,000.00
85.64	Paris Landing	TN	39,900,000.00	32,000,000.00
91.77	ChoctawhatcheeBy	FL	18,500,000.00	14,800,000.00
92.19	Tom Edison	FL	33,500,000.00	1,500,000.00
113.38	Charter Oak	CN	81,300,000.00	65,000,000.00
134.65	Baldwin	CN	164,100,000.00	2,200,000.00

Note: The requests listed above in FY 88 are for construction or right-of-way. Preliminary engineering requests are no longer considered eligible by the FHWA for unfunded projects.

UNFUNDED PROJECTS FY 89 REQUESTS

Rating Factor	Bridge Name	State	Total Project Cost	Federal-aid Funds Requested for FY 89
2.24	Rt 3/Berry's Creek	NJ	$18,200,000.00	$ 240,000.00
4.86	SR 115/Mo. River	MO	55,905,000.00	44,724,000.00
5.17	J.P. Sousa	DC	20,000,000.00	16,000,000.00
6.55	Sixth Street	WV	28,335,000.00	20,000,000.00
7.47	Prescott	MN	16,280,000.00	6,512,000.00
7.82	Queens Mid. Viad.	NY	34,870,000.00	27,896,000.00
8.44	Arrigoni	CN	20,250,000.00	16,200,000.00
12.62	Jefferson St.	TN	12,500,000.00	10,000,000.00
15.55	Rt 147/Grassy S.	NJ	40,000,000.00	32,000,000.00
21.67	Dog River	AL	16,025,000.00	12,820,000.00
30.63	NJ 36/Shrewsbury R.	NJ	19,713,000.00	150,000.00
31.87	Bayou Chico	FL	15,622,000.00	440,000.00
32.33	US 30/Mo. R.	NE	11,890,000.00	3,319,605,00
42.53	Clark (Alton)	IL	80,776,000.00	3,884,000.00
48.59	Paris Landing	TN	28,307,000.00	22,645,600.00
50.59	Sabine River	TX	15,000,000.00	12,000,000.00
55.52	Dickey Place	IN	15,675,560.00	12,200,448.00
78.40	Baldwin	CN	131,726,250.00	105,381,000.00

Rating Factor	Bridge Name	State	Total Project Cost	Federal-aid Funds Requested for FY 89
92.87	Red River	TX	10,100,000.00	8,080,000.00
112.75	Lavaca Bay C'Way	TX	18,500,000.00	14,800,000.00
138.58	Forest City	SD	21,500,000.00	4,000,000.00
142.12	18th Street/R.R.	KN	17,438,000.00	13,950,000.00
196.38	Navajo	AZ	9,300,000.00	7,440,000.00
	Virginia St.#	WV	4,500,000.00	3,440,000.00

# Special Legislation made this bridge eligible for consideration

Note: The requests listed above in FY 89 are for construction or right-of-way. Preliminary engineering requests are no longer considered eligible by the FHWA for unfunded projects.

UNFUNDED PROJECTS FY 90 REQUESTS

Rating Factor	Bridge Name	State	Total Project Cost	Federal-aid Funds Requested for FY 90
1.51	Military Ave	MI	$ 13,300,000	$ 10,000,000
4.02	Williamsburg	NY	428,000,000	41,400,000
6.17	J.P. Sousa	DC	20,000,000	16,000,000
7.91	Sixth St/Sag.	MI	29,100,000	24,640,000
13.09	US1/Saugatuck	CT	14,867,000	10,885,000
15.68	Belle Vernon	PA	21,793,000	16,442,000
16.08	US69/18th St	KS	14,330,000	11,464,000
16.23	I95/Lake Salt.	CT	22,229,000	6,000,000
16.26	Jefferson St.	TN	15,114,000	11,100,000
16.43	Ebey Slough	WA	23,100,000	18,480,000
16.67	US20(Dubuque)	IA	18,117,000	13,554,000
19.07	Dog River	AL	15,920,000	12,736,000
20.00	Battery Creek	SC	10,210,000	8,168,000
26.24	Sabine River	LA	15,000,000	12,000,000
37.09	Santa Clara R	CA	18,630,000	14,904,000
45.02	Intracoast W	LA	20,500,000	16,400,000
46.39	Whitehurst Fy	DC	54,000,000	21,600,000
47.92	Isle of Palms	SC	27,650,000	22,120,000
56.23	Inter.Socastee	SC	17,500,000	9,600,000
57.97	Dickey Place	IN	16,719,000	12,689,000
59.98	Rt140/Conn.R	CT	15,523,000	6,000,000
74.20	Stono River	SC	21,100,000	16,880,000
75.26	Thomas Edison	FL	33,665,000	26,930,000
77.28	Red River	TX	10,100,000	7,272,000
96.53	Lavaca Bay C	TX	18,500,000	13,320,000
118.01	Forest City	SD	16,800,000	1,600,000
121.31	Baldwin	CT	164,130,000	100,261,000
294.79	Dawhoo	SC	16,872,000	13,498,000

Note: The requests listed above in FY 90 are for construction or right-of-way. Preliminary engineering requests are no longer considered eligible by the FHWA for unfunded projects.

EXEMPT PROGRAMS

SENATOR LAUTENBERG: What was the obligation rate for those programs outside the ceiling? List for years 1987, 1988, and 1989 and the amount obligated.

ANSWER: Following are the obligations by fiscal year for each of the programs exempt from the Federal Aid Highways obligation ceiling:

FEDERAL-AID HIGHWAYS
EXEMPT PROGRAM OBLIGATIONS
(Dollars in millions)

PROGRAMS	ACTUAL OBLIGATIONS FY 1987	FY 1988	FY 1989
Not Subject to Limitation			
Minimum Allocation	253	960	1,075
Emergency Relief	72	112	92
Section 149b Demo Author.	41	72	104
Section 149c Demo Min. All.	8	9	7
Accelerated Bridges	1	...	2
Woodrow Wilson Bridge	-2	10	2
Union Station	1	1	2
Usable Segments Demo. (131j)	12	3	1
Alaska Highway	-1	5	6
Other	...	...	25
Total, Exempt Programs	385	1,172	1,316

SENATOR LAUTENBERG: Please update the list of deficient bridges by State.

ANSWER: The following tables list deficient bridges on and off the Federal-aid system by State.

COUNT OF DEFICIENT BRIDGES BY STATE
ON FEDERAL-AID SYSTEM
AS OF JUNE 26, 1989

	BRIDGES IN INVENTORY	NON-DEFICIENT BRIDGES	STRUCTURALLY DEFICIENT	FUNCTIONALLY OBSOLETE	DEFICIENT BRIDGES
ALABAMA	7,708	4,829	830	2,049	2,879
ALASKA	582	543	24	15	39
ARIZONA	4,580	4,291	63	226	289
ARKANSAS	5,969	4,486	383	1,100	1,483
CALIFORNIA	14,901	12,627	523	1,751	2,274
COLORADO	3,610	3,003	456	151	607
CONNECTICUT	2,649	985	628	1,036	1,664
DELAWARE	476	403	44	29	73
DIST. OF COL.	210	167	42	1	43
FLORIDA	6,188	5,157	124	907	1,031
GEORGIA	8,072	5,370	818	1,884	2,702
HAWAII	667	514	83	70	153
IDAHO	1,680	1,452	150	70	220
ILLINOIS	10,760	8,569	1,728	463	2,191

	BRIDGES IN INVENTORY	NON-DEFICIENT BRIDGES	STRUCTURALLY DEFICIENT	FUNCTIONALLY OBSOLETE	DEFICIENT BRIDGES
INDIANA	7,310	5,253	763	1,294	2,057
IOWA	7,220	5,410	703	307	1,010
KANSAS	10,787	7,644	679	2,464	3,143
KENTUCKY	4,993	2,846	225	1,922	2,147
LOUISIANA	6,023	4,236	868	919	1,787
MAINE	1,281	1,065	156	60	216
MARYLAND	2,723	2,143	369	211	580
MASSACHUSETTS	3,779	2,271	1,060	448	1,508
MICHIGAN	5,871	4,520	1,105	246	1,351
MINNESOTA	5,157	4,276	560	321	881
MISSISSIPPI	7,601	4,532	1,417	1,652	3,069
MISSOURI	8,820	5,474	1,924	1,422	3,346
MONTANA	2,498	1,172	90	1,236	1,326
NEBRASKA	5,095	3,795	777	523	1,300
NEVADA	813	727	23	63	86
NEW HAMPSHIRE	1,247	962	156	129	285
NEW JERSEY	4,241	2,991	926	324	1,250
NEW MEXICO	2,376	1,948	207	221	428
NEW YORK	8,833	3,435	4,867	531	5,398
NORTH CAROLINA	5,646	4,021	241	1,384	1,625
NORTH DAKOTA	1,781	1,081	149	551	700
OHIO	12,335	10,273	1,915	147	2,062
OKLAHOMA	8,725	5,505	1,269	1,951	3,220
OREGON	3,765	3,358	221	186	407
PENNSYLVANIA	10,952	7,148	2,699	1,105	3,804
RHODE ISLAND	561	472	64	25	89
SOUTH CAROLINA	4,283	3,534	191	558	749
SOUTH DAKOTA	2,740	2,303	257	180	437
TENNESSEE	7,543	4,994	1,121	1,428	2,549
TEXAS	26,715	21,934	1,296	3,485	4,781
UTAH	1,599	1,499	70	30	100
VERMONT	1,298	857	182	259	441
VIRGINIA	6,919	5,120	787	1,012	1,799
WASHINGTON	4,042	2,738	639	665	1,304
WEST VIRGINIA	3,308	1,682	1,152	474	1,626
WISCONSIN	6,369	4,367	1,614	388	2,002
WYOMING	1,897	1,772	46	79	125
PUERTO RICO	1,025	592	104	329	433
TOTAL	276,243	200,366	36,796	39,081	75,877

SENATOR LAUTENBERG: What is the estimated amount of obligations for exempt programs in fiscal years 1990 and 1991 (assuming current law)?

ANSWER: Following are the estimated obligations for exempt programs.

FEDERAL-AID HIGHWAYS
OBLIGATIONS EXEMPT FROM CEILING
(Dollars in millions)
FY 1991 BASED ON CONTINUING LAW

Program	FY 1990 Estimate	FY 1991 Estimate
Minimum Allocation	950	950
Emergency Relief	100	100
Federal Disaster Assistance	227	136
Section 149b Demo Author.	166	178
Section 149c Demo Min. All.	12	12
Accelerated Bridges	2	7
Woodrow Wilson Bridge	1	1
Union Station	2	...
Usable Segments Demo. (131j)	1	...
Alaska Highway	5	5
Total, Exempt Programs	$1,466	$1,389

COUNT OF DEFICIENT BRIDGES BY STATE
OFF FEDERAL-AID SYSTEM
AS OF JUNE 26, 1989

	BRIDGES IN INVENTORY	NON-DEFICIENT BRIDGES	STRUCTURALLY DEFICIENT	FUNCTIONALLY OBSOLETE	DEFICIENT BRIDGES
ALABAMA	7,705	3,336	2,642	1,727	4,369
ALASKA	210	160	32	18	50
ARIZONA	1,142	1,011	77	54	131
ARKANSAS	7,016	2,976	1,263	2,777	4,040
CALIFORNIA	7,388	3,771	1,137	2,480	3,617
COLORADO	3,901	1,928	1,663	310	1,973
CONNECTICUT	1,187	487	313	387	700
DELAWARE	262	159	32	71	103
DIST. OF COL.	27	24	3	0	3
FLORIDA	4,103	3,050	288	765	1,053
GEORGIA	6,133	3,097	2,518	518	3,036
HAWAII	375	259	30	86	116
IDAHO	2,037	1,214	371	452	823
ILLINOIS	14,012	9,077	3,460	1,475	4,935
INDIANA	10,214	5,380	2,059	1,975	4,034
IOWA	18,488	8,355	5,078	5,055	10,133
KANSAS	14,845	5,533	4,440	4,872	9,312
KENTUCKY	7,491	2,511	1,828	3,352	5,190
LOUISIANA	7,950	3,516	2,952	1,482	4,434
MAINE	1,303	752	288	263	551
MARYLAND	1,864	1,084	314	466	780
MASSACHUSETTS	1,194	433	621	140	761
MICHIGAN	4,739	2,648	1,645	446	2,091
MINNESOTA	7,845	5,072	1,374	1,399	2,773
MISSISSIPPI	9,319	3,795	4,725	799	5,524
MISSOURI	14,595	3,372	10,091	1,132	11,223
MONTANA	2,207	772	411	1,024	1,435
NEBRASKA	10,694	3,416	6,663	615	7,278
NEVADA	274	199	38	37	75
NEW HAMPSHIRE	1,323	512	328	483	811
NEW JERSEY	1,772	988	445	339	784
NEW MEXICO	1,072	739	195	138	333
NEW YORK	8,480	2,070	5,679	731	6,410
NORTH CAROLINA	10,651	4,132	791	5,728	6,519
NORTH DAKOTA	3,450	1,164	1,741	545	2,286
OHIO	16,887	13,281	2,293	1,313	3,606
OKLAHOMA	14,008	4,970	6,154	2,884	9,038
OREGON	2,830	2,142	316	372	688
PENNSYLVANIA	11,708	6,372	3,414	1,922	5,336
RHODE ISLAND	136	92	26	18	44
SOUTH CAROLINA	4,634	3,698	686	250	936
SOUTH DAKOTA	4,029	1,356	1,477	1,196	2,673
TENNESSEE	11,064	6,309	3,017	1,738	4,755
TEXAS	18,003	8,635	4,208	5,160	9,368
UTAH	1,003	774	171	58	229
VERMONT	1,365	506	336	523	859
VIRGINIA	5,810	3,173	833	1,804	2,637
WASHINGTON	2,869	2,203	309	357	666
WEST VIRGINIA	3,132	930	1,480	722	2,202
WISCONSIN	6,606	3,450	2,225	931	3,156
WYOMING	930	423	259	248	507
PUERTO RICO	685	349	63	273	336
TOTAL	301,975	146,463	93,594	61,918	155,512

MINIMUM ALLOCATION

SENATOR LAUTENBERG: Provide the estimated amount of "minimum apportionment" available to each State in fiscal year 1991, (under current law under the Administration's proposal)?

ANSWER: Under current law, based on latest available data the estimated minimum allocation amount available to each State is as follows (based on estimated FY 1990 carryover plus estimated FY 1991 Minimum Allocation Apportionment):

STATE	ESTIMATED AMOUNT
ARIZONA	63,453,151.92
ARKANSAS	54,143,514.57
CALIFORNIA	194,688,682.77
FLORIDA	212,254,107.29
GEORGIA	155,975,871.38
ILLINOIS	0.00
INDIANA	153,314,129.72
KANSAS	1,723,189.66
KENTUCKY	21,351,240.20
MAINE	37,162,801.89
MICHIGAN	15,755,468.41
MISSISSIPPI	43,752,219.31
MISSOURI	50,203,928.38
NORTH CAROLINA	154,443,329.99
OHIO	154,665,666.72
OKLAHOMA	63,798,954.92
OREGON	19,423,083.33
SOUTH CAROLINA	62,893,373.72
TENNESSEE	28,998,300.13
TEXAS	348,004,182.85
VIRGINIA	77,462,366.93
WISCONSIN	93,556,307.85
TOTAL	2,007,023,871.96

SENATOR LAUTENBERG: For the record provide the amount of minimum apportionment provided each State for the past three fiscal years.

ANSWER: The minimum allocation apportionment by State for FY 1988 thru FY 1990 is shown below:

STATE	FY 1988	FY 1989	FY 1990
ARIZONA	9,986,271	0	40,578,820
ARKANSAS	14,442,230	28,621,158	33,255,497
CALIFORNIA	71,490,780	78,378,002	195,324,988
FLORIDA	22,763,026	90,821,023	15,690,282
GEORGIA	38,214,530	87,515,537	108,427,210
ILLINOIS	0	0	0
INDIANA	77,349,223	106,807,602	74,488,883
KANSAS	0	0	3,607,240
KENTUCKY	0	3,138,680	0
MAINE	0	1,955,796	0
MICHIGAN	28,828,078	35,279,832	11,829,079
MISSISSIPPI	9,580,936	25,832,911	27,774,846
MISSOURI	10,763,223	53,205,402	40,306,421
NORTH CAROLINA	67,456,375	116,554,265	16,417,550

STATE	FY 1988	FY 1989	FY 1990
OHIO	81,682,478	110,076,079	108,497,630
OKLAHOMA	50,806,549	53,898,867	50,516,215
OREGON	0	7,954,867	1,753,148
SOUTH CAROLINA	13,273,511	0	40,279,832
TENNESSEE	13,553,331	50,397,680	30,649,715
TEXAS	253,931,521	302,197,272	272,104,498
VIRGINIA	6,794,865	0	49,506,306
WISCONSIN	32,973,588	63,308,104	61,005,016
TOTAL	803,890,515	1,215,943,077	1,182,013,176

SENATOR LAUTENBERG: List by State the amount of unobligated minimum apportionment funds at the end of fiscal year 1990.

ANSWER: It is very difficult to estimate the unobligated balance on a State-by-State basis since each State determines the use of its funds. Using projected total obligations together with the total available by State for FY 1990, the estimated unobligated balance of minimum allocation funds at the end of FY 1990, by State, is as follows:

STATE	ESTIMATED UNOBLIGATED BALANCE 9-30-90
ARIZONA	30,870,323.92
ARKANSAS	20,204,050.57
CALIFORNIA	93,307,348.77
FLORIDA	54,095,336.29
GEORGIA	54,202,798.38
ILLINOIS	0.00
INDIANA	80,365,344.72
KANSAS	1,723,189.66
KENTUCKY	314,659.20
MAINE	294,590.89
MICHIGAN	15,755,468.41
MISSISSIPPI	19,949,092.31
MISSOURI	25,673,889.38
NORTH CAROLINA	50,918,070.99
OHIO	113,914,151.72
OKLAHOMA	26,065,135.92
OREGON	2,803,983.33
SOUTH CAROLINA	37,409,116.72
TENNESSEE	28,348,534.13
TEXAS	152,043,557.85
VIRGINIA	23,649,314.93
WISCONSIN	36,980,812.85
TOTAL	868,888,770.96

SENATOR LATENBERG: Provide for the record by State and amount where the States have obligated minimum apportionment funds by category.

ANSWER: The following table shows how the States have obligated minimum allocation funds on the Federal-aid highway systems as of April 30, 1990.

Use of Minimum Allocation Funds
By Federal-Aid Highway Systems
Cumulative Obligations FY 1984 - FY 1990

as of April 30, 1990

(dollars in thousands)

State	Interstate	Primary	Secondary	Urban	Other	Total
Arizona	52,623	0	0	0	0	52,623
Arkansas	0	66,251	11,598	12,779	0	90,628
California	99,446	307,314	3,088	171,957	1,753	583,558
Florida	25,763	72,942	4,492	5,986	4,276	113,459
Georgia	0	207,662	3,970	3,746	1,444	216,822
Illinois	26,867	34,818	3,175	5,910	1,922	72,692
Indiana	35,449	147,312	56,531	96,397	9,240	344,929
Kentucky	2,640	713	212	409	0	3,974
Maine	0	0	0	0	1,300	1,300
Michigan	6,391	76,852	15,702	83,472	114	182,531
Mississippi	0	31,060	1,618	1,840	0	34,518
Missouri	0	78,217	2,410	24,426	3,045	108,098
North Carolina	25,265	189,686	1,578	112,478	3,235	332,242
Ohio	187,927	133,603	69,574	84,730	4,545	480,379
Oklahoma	11,460	218,152	19,488	49,044	0	298,144
Oregon	0	1,580	0	708	96	2,384
South Carolina	0	6,799	0	3,048	351	10,198
Tennessee	14,648	100,715	0	0	0	115,363
Texas	365,291	1,016,376	1,702	73,622	7,299	1,464,290
Virginia	0	1,076	871	4,754	0	6,701
Wisconsin	2,298	242,745	153	1,580	257	247,033
Total	856,068	2,933,873	196,162	736,886	38,877	4,761,866

DISCRETIONARY PROGRAM LEVELS

SENATOR LAUTENBERG: Provide the discretionary program amount authorized for fiscal years 1986 through 1991, and the amounts obligated for each program for those years (for 1990, amounts to date.)

ANSWER: Following are the authorizations and obligations for fiscal years 1985 through 1991 for the discretionary programs:

	Authorizations					
	1986	1987	1988	1989	1990	1991 *
Interstate Construction Discretionary	287,100,000	300,000,000	285,148,781	279,837,124	263,868,638	300,000,000
Interstate 4R Discretionary	0	165,239,802	190,099,187	186,558,082	175,912,426	200,000,000
Interstate Substitution Discretionary	173,426,250	152,464,701	175,402,144	172,134,810	162,312,197	185,000,000
Bridge Discretionary	200,000,000	185,894,779	213,861,585	209,877,842	197,901,479	225,000,000
	660,526,250	803,599,282	864,511,697	848,407,858	799,994,740	910,000,000

* Does not reflect any set-aside for Section 149 Demonstration Projects.

	Obligations				
	1986	1987	1988	1989	1990 **
Interstate Construction Discretionary	779,782,594	676,192,933	1,469,808,184	844,631,287	77,137,644
Interstate 4R Discretionary	0	165,192,933	190,099,187	182,826,254	83,179,655
Interstate Substitution Discretionary	173,456,250	103,700,545	182,928,130	183,525,782	37,350,592
Bridge Discretionary	215,910,372	188,910,372	211,667,900	205,038,368	106,387,560
	1,169,149,216	1,133,996,783	2,054,503,401	1,416,021,691	304,055,451

** Obligations as of April 30, 1990.

DISCRETIONARY PROGRAM LEVELS

SENATOR LAUTENBERG: Provide for the record by program the amount of discretionary funding that was reduced to fund section 149 programs (demonstration and priority projects).

ANSWER: The amounts deducted to fund Section 149 demonstration projects for fiscal year 1990 are listed below:

DISCRETIONARY ACCOUNT	AMOUNT DEDUCTED TO FUND F.Y. 1990 SECTION 149 PROJECTS (PL 100-17)
INTERSTATE CONSTRUCTION	39,504,317
INTERSTATE TRANSFER	19,687,621
INTERSTATE 4R	21,901,884
BRIDGE	24,242,713
TOTAL	105,336,535

EMERGENCY RELIEF OBLIGATIONS

SENATOR LAUTENBERG: Please update the table on pages 121 and 122 of Senate Hearing Report 101 - 285, part 2.

ANSWER: The requested table follows:

EMERGENCY RELIEF
Obligations
($millions)

	FY '86 Obl.	FY '87 Obl.	FY '88 Obl.	FY '89 Obl.
ALABAMA	0.0	0.0	(0.2)	0.0
ALASKA	0.0	3.9	1.8	0.2
ARIZONA	3.3	(0.3)	(0.3)	0.0
ARKANSAS	0.4	0.0	1.7	(0.4)
CALIFORNIA	74.5	21.6	22.6	0.1
COLORADO	5.3	0.0	(2.2)	(0.3)
CONNECTICUT	0.8	(0.3)	0.0	0.0
DELAWARE	0.0	0.0	0.0	0.4
DIST. OF COL.	(0.1)	0.0	0.0	0.0
FLORIDA	0.8	1.0	0.0	1.6
GEORGIA	0.0	1.1	(0.2)	0.0
HAWAII	(0.5)	0.0	(0.5)	0.0
IDAHO	0.9	1.2	7.3	11.4
ILLINOIS	0.0	0.0	0.0	0.1
INDIANA	0.0	0.0	0.0	0.0
IOWA	0.0	0.0	0.0	0.0
KANSAS	0.6	0.0	0.4	0.0
KENTUCKY	(0.8)	(0.2)	(0.2)	0.0
LOUISIANA	2.4	(0.1)	0.0	0.1
MAINE	0.0	4.9	4.4	1.3
MARYLAND	(0.1)	(1.0)	(0.1)	0.0
MASSACHUSETTS	0.0	0.0	2.0	0.5
MICHIGAN	1.4	5.9	0.8	0.0
MINNESOTA	0.0	0.0	0.9	0.0
MISSISSIPPI	(0.3)	0.4	0.0	(0.2)
MISSOURI	0.0	0.0	0.0	0.0
MONTANA	0.4	0.0	0.0	0.0

	FY '86 Obl.	FY '87 Obl.	FY '88 Obl.	FY '89 Obl.
NEBRASKA	0.1	0.0	0.0	0.0
NEVADA	2.7	1.6	(0.2)	0.0
NEW HAMPSHIRE	0.0	0.0	0.0	0.0
NEW JERSEY	0.0	0.0	0.0	6.6
NEW MEXICO	0.0	0.0	0.0	0.0
NEW YORK	0.0	0.0	20.0	0.0
NORTH CAROLINA	0.2	0.0	(0.1)	(1.2)
NORTH DAKOTA	0.0	0.0	0.0	0.0
OHIO	0.0	0.0	0.0	0.0
OKLAHOMA	0.9	8.4	2.0	(0.3)
OREGON	3.9	0.0	0.0	(1.0)
PENNSYLVANIA	3.4	0.2	0.0	(0.3)
RHODE ISLAND	0.0	0.0	0.0	0.0
SOUTH CAROLINA	0.0	0.0	0.0	0.0
SOUTH DAKOTA	0.3	1.2	1.4	0.0
TENNESSEE	0.2	(0.2)	0.0	1.0
TEXAS	(0.3)	0.0	0.0	0.3
UTAH	7.8	3.3	0.9	2.4
VERMONT	0.0	0.0	0.0	0.0
VIRGINIA	5.8	1.5	0.6	0.6
WASHINGTON	6.5	6.0	39.2	66.0
WEST VIRGINIA	25.4	8.2	1.2	(1.0)
WISCONSIN	0.0	0.0	0.0	0.0
WYOMING	0.0	0.0	0.0	0.0
PUERTO RICO	1.1	4.0	3.6	0.7
VIRGIN ISLANDS	0.0	0.0	0.0	0.0
Subtotals:	147.0	72.3	106.8	88.6
BIA	0.5	0.4	0.9	0.1
BLM	0.1	0.1	0.0	0.0
FOREST SERVICE	10.4	8.6	5.0	1.1
PARK SERVICE	0.2	0.1	0.0	0.1
Subtotals:	11.2	9.2	5.9	1.3
TOTALS:	158.2	81.5	112.7	89.9

RAIL-HIGHWAY CROSSING DEMONSTRATION PROJECTS

SENATOR LAUTENBERG: Please update the table contained on pages 123, 124 and 125 of Senate Hearing Report 101-285.

ANSWER: The requested tables follow:

ALLOCATIONS TO RAIL-HIGHWAY CROSSING DEMONSTRATION PROJECTS BY FISCAL YEAR
(in thousands of dollars)

Project	FY 74-85	FY 1986	FY 1987	FY 1988	FY 1989	FY 1990	Total
Wheeling, WV	$ 600	$ -----	$ -----	$ -----	$ -----	$ -----	$ 600
Augusta, GA	6,072	957	2,000	1,188	1,170	990	12,377
Anoka, MN	2,915	-----	-----	(17)	-----	-----	2,898
Blue Island, IL	230	-----	-----	-----	-----	-----	230
Carbondale, IL	21,804	2,871	-----	1,425	420	-----	26,520
Dolton, IL	585	-----	-----	-----	-----	-----	585
E. St. Louis, IL	8,661	-----	-----	-----	-----	-----	8,661
Springfield, IL	7,994	1,400	7,325	1,425	3,362	4,453	25,959
Hammond, IN	14,370	-----	-----	-----	-----	-----	14,370
Lafayette, IN	14,800	5,264	3,500	-----	-----	3,464	27,028
New Albany, IN	2,326	-----	-----	-----	-----	-----	2,326
Terre Haute, IN	7,000	-----	-----	-----	(1,000)	-----	6,000
Metairie, LA	1,702	-----	-----	-----	-----	-----	1,702
Pine Bluff, AR	6,655	957	-----	1,900	841	2,474	12,827
Brownsville, TX	5,670	2,392	750	712	420	-----	9,944
Greenville, TX	9,500	-----	-----	-----	-----	-----	9,500
Sherman, TX	-----	-----	-----	-----	-----	-----	-----
Lincoln, NE	12,579	2,871	2,000	1,140	1,177	3,464	23,231
Elko, NV	42,530	-----	-----	-----	-----	-----	42,530
TOTALS:	$165,993	$16,712	$15,575	$ 7,773	*$ 6,390	$14,845	*$227,288

( ) - Denotes deallocation of funds

* In addition to the figures in the table, $500,000 was allocated for a rail relocation planning study in Bryan-College Station, Texas, to implement Section 354 of the FY 1989 DOT Appropriations Act.

RAIL-HIGHWAY CROSSING DEMONSTRATION PROJECTS
(dollars in thousands)

Project	Description	Total Estimated Cost	Demonstration Funds Allocated
Wheeling, WV	Rail relocation in downtown	$ 600	$ 600 (a)
Augusta, GA	Rail relocation involving three railroads	130,600	12,377
Anoka, MN	Grade separation	3,100	2,898
Blue Island, IL	Grade separation	242	230 (a)
Carbondale, IL	Depress rail line in downtown	88,600	26,520
Dolton, IL	Grade separation	616	585 (a)
E. St. Louis, IL	Seven grade separations and minor rail relocation	28,700	8,661
Springfield, IL	Rail relocation southwest of city, grade separations in city	32,900	25,959
Hammond, IN	Rail relocation within downtown area	18,600	14,370
Lafayette, IN	Rail relocation within downtown area	123,800	27,028
New Albany, IN	Minor rail relocation	2,600	2,326
Terre Haute, IN	Grade separation	5,800	6,000
Metairie, LA	Rail consolidation and grade separation	19,000	1,702
Pine Bluff, AR	Five grade separations and minor rail relocation	19,900	12,827

Project	Description	Total Estimated Cost	Demonstration Funds Allocated
Brownsville, TX	Rail relocation to loop around city	$ 36,000	$ 9,944
Greenville, TX	Grade separation and minor rail relocation	14,800	9,500
Sherman, TX	--------- WITHDREW FROM PROGRAM -------------		
Lincoln, NB	Three grade separations and minor rail relocations	37,000	23,231
Elko, NV	Rail relocation to loop around downtown	44,800	42,530
		$ 607,658	$ 227,288 (b)

(a) Project not under construction by September 30, 1985. In accordance with Section 163(p) of the Federal-Aid Highway Act of 1973, as amended, no further demonstration funds will be provided to the project.

(b) In addition to the figures in the table, $500,000 was allocated for a rail relocation planning study in Bryan-College Station, Texas, to implement Section 354 of the FY 1989 DOT Appropriation Act.

INTERSTATE COST ESTIMATE

SENATOR LAUTENBERG: For the record provide the latest Interstate Substitute Cost Estimate for both highways and transit with apportionment factors.

ANSWER: The following is a table showing the additional substitute highway and transit funds (Federal funds) required and the associated apportionment factors. The split between highways and transit is based on the 1989 Interstate Substitution Cost Estimate and the table reflects the apportionments and allocations of substitute highway and transit funds made for fiscal year 1990. A further revision to the factors can be expected when the 1990 Interstate Substitution Cost Estimate is prepared in accordance with the provisions of the Surface Transportation and Uniform Assistance Act of 1987.

(PRELIMINARY)

ESTIMATED FEDERAL FUNDS REQUIRED TO COMPLETE SUBSTITUTE HIGHWAY AND TRANSIT PROJECTS AND APPORTIONMENT FACTORS FOR DISTRIBUTION OF 75 PERCENT (HIGHWAY)/50 PERCENT (TRANSIT) OF THE FISCAL YEAR 1991 AUTHORIZATIONS*

STATE	WITHDRAWAL AREA	ESTIMATED ADDITIONAL FUNDS REQUIRED TO COMPLETE SUBSTITUTE HIGHWAY PROJECTS	HIGHWAY APPORTIONMENT FACTORS (PERCENT)	ESTIMATED ADDITIONAL FUNDS REQUIRED TO COMPLETE SUBSTITUTE TRANSIT PROJECTS	TRANSIT APPORTIONMENT FACTORS (PERCENT)
ARIZONA	Tucson	0	0.000	0	0.000
CALIFORNIA	Sacramento	0	0.000	250,806	0.049
	San Francisco	36,109,687	2.248	27,056,734	5.290
COLORADO	Denver	0	0.000	0	0.000
CONNECTICUT	Bolton to Killingly	176,634,538	10.997	537,513	0.105
	Hartford-New Britain	108,252,758	6.740	1,658,265	0.324
DISTRICT OF COLUMBIA	Washington	45,394,714	2.826	375,271	0.073
GEORGIA	Atlanta	31,453,236	1.958	0	0.000
ILLINOIS	Chicago	35,423,968	2.206	42,836,849	8.375
INDIANA	Indianapolis	13,043,016	0.812	0	0.000
IOWA	Waterloo	22,531,162	1.403	342,053	0.067
MARYLAND	Baltimore	64,920,080	4.042	130,718,640	25.556
	Bowie to Millersville	27,674,194	1.723	0	0.000
	Washington	2,290,370	0.143	0	0.000
MASSACHUSETTS	Boston	17,178,146	1.070	13,722,042	2.683
	Fall River to Providence	3,781,250	0.235	0	0.000
MINNESOTA	Duluth	0	0.000	16,801	0.003
	Minneapolis-St. Paul	0	0.000	0	0.000
NEBRASKA	Omaha	0	0.000	0	0.000
NEW JERSEY	New York City	12,218,791	0.761	1,818,713	0.355
	New York City-Trenton	92,550,726	5.762	0	0.000
	Philadelphia	0	0.000	0	0.000
NEW YORK	Albany	75,078	0.005	44,338	0.009
	New York City	593,869,676	36.975	238,530,582	46.634
OHIO	Cleveland	27,169,925	1.692	13,050,796	2.551
OREGON	Portland	22,498,413	1.401	15,389,240	3.009
	Salem	0	0.000	0	0.000
PENNSYLVANIA	Philadelphia	0	0.000	0	0.000
	Pittsburgh	182,267	0.011	0	0.000
RHODE ISLAND	Rhode Island	197,220,463	12.279	12,746,332	2.492
TENNESSEE	Memphis	75,672,977	4.711	12,404,053	2.425
VIRGINIA	Washington	0	0.000	0	0.000
	TOTALS	1,606,145,435	100.000	511,499,028	100.000

*Amounts are in Federal funds.

HIGHWAY DATA

SENATOR LAUTENBERG: For the record, provide the latest donor/donee results by States.

ANSWER: The following table contains the latest donor/donee ratios as published in the 1988 Highway Statistics.

STATE	FY-1989	STATE	FY-1989
Alabama	0.94	Florida	1.01
Alaska	5.39	Georgia	0.76
Arizona	0.62	Hawaii	6.80
Arkansas	0.72	Idaho	2.55
California	0.71	Illinois	0.94
Colorado	1.81	Indiana	0.86
Connecticut	1.89	Iowa	1.18
Delaware	1.20	Kansas	0.79
D. C.	5.26	Kentucky	0.73

STATE	FY-1989	STATE	FY-1989
Louisiana	1.03	Oklahoma	0.84
Maine	0.89	Oregon	0.80
Maryland	1.19	Pennsylvania	0.86
Massachusetts	1.25	Puerto Rico	----
Michigan	0.88	Rhode Island	2.65
Minnesota	1.35	South Carolina	0.65
Mississippi	0.83	South Dakota	1.55
Missouri	0.83	Tennessee	0.94
Montana	1.66	Texas	0.90
Nebraska	0.97	Utah	1.08
Nevada	1.05	Vermont	1.64
New Hampshire	1.04	Virginia	0.67
New Jersey	0.87	Washington	2.22
New Mexico	1.03	West Virginia	0.96
New York	1.20	Wisconsin	0.79
North Carolina	1.03	Wyoming	1.27
North Dakota	1.58	United States	1.00
Ohio	0.80		

MOTOR CARRIER SAFETY STATISTICS

SENATOR LAUTENBERG: Please update for the record motor carrier safety statistics similar to those found on pages 151 and 152.

ANSWER: The requested charts follow.

Fiscal Year	1986	1987	1988	1989
Total Carriers	220,000	190,000	187,000	190,000
Total H/M Shippers	22,000	30,000	25,000	25,000
Total Entities	242,000	220,000	212,000	215,000
Safety Specialists and Safety Specialist Trainees .	138	212	303	289
Ratio Staff to Entities ...	1:1,754	1:1,038	1:700	1:744
Ratio Staff to Drivers	1:32,609	1:21,226	1:14,851	1:15,571

WORKLOAD DATA

	Fiscal Year				
	1985	1986	1987	1988	1989
Number of driver/vehicle inspections..................	16,046	10,027	910	238	2,357
Number of safety audits/ reviews......................	10,492	6,637	23,714	29,655	18,422
Number of investigations.....	2,316	2,590	885*	919*	1,609*
Number of enforcement cases prosecuted and closed.......	739	529	498	456	1,133
Amount of fines collected ($)...............	788,916	1,877,300	2,009,597	1,998,647	4,591,102

*Beginning in FY 1987, investigations without evidence are included in safety audits/reviews.

ESTIMATED WORKLOAD DATA

	Fiscal Year	
	1990	1991
Number of driver/vehicle inspections	1,585	2,000
Number of safety audit/reviews......	18,500	24,000
Number of investigations............	1,700	2,000
Number of enforcement cases prosecuted and closed..............	1,200	1,400
Amount of fines collected($).......	4,900,000	5,700,000

FEDERAL HIGHWAY ADMINISTRATION PRINCIPAL WORK ACTIVITIES IN THE MOTOR CARRIER SAFETY PROGRAM

—	1986	1987	1988	1989
Safety Management Activities:				
Safety management audits at carrier facility	2,605	19,313*	25,415*	14,864*
Safety management audits, hazardous material carriers	1,205	4,012	3,716	2,707
Safety management audits, hazardous material shippers	897	389	524	851
Hazardous material incident investigations	91	30	18	34
Cargo tank manufacturer audits	18	10	3	6
Financial responsibility audits	1,912	3,617	87	61
Roadside driver/equipment examination: truck	6,365	837	189	2,310
Out-of-service vehicle	3,011	273	58	**
Roadside driver/equipment examination: bus	3,662	73	3	47
Out-of-service: bus	295	2	49	**
Out-of-service (truck and bus drivers)	969	100	56	**
Enforcement Activities:				
Case reports	2,590	885	919	1,609
Civil forfeiture proceedings	529	568	456	1,133
Investigation of carrier accidents:				
Accident investigations	39	27	41	69
Carrier accident report reviews	26,176	25,000	**	**
Motor Carrier Safety Assistance Program:				
State and local technical assistance (contacts)	4,360	3,409	**	**
State and local training presented (sessions)	357	255	**	**
State and local monitoring/evaluation (contacts)	2,486	1,198	**	**
Technical Assistance and Safety Education:				
Safety or hazardous materials meetings attended	482	566	650	691
Program assistance (contacts)	1,476	843	**	**
Training presented (sessions)	175	106	**	**

*Includes Safety Reviews and Compliance Reviews.

**Requirements to collect and report output data for these line items has been eliminated.

FHWA changed program emphasis in mid-1989 to spend more time on enforcement rather than educational activities as recommended in a Congressional Research Service report. Therefore, FHWA devoted more resources to conducting compliance reviews than safety reviews. A compliance review, an in-depth review of the carrier's operations and records, takes four to five times longer to complete than does a safety review. The decline in the total number of reviews (or audits) from 1988 to 1989 which reflects a decrease in the number of safety reviews in favor of an increase in the number of compliance reviews, does not reflect less of a commitment in overall resources devoted to motor carrier safety.

OUT-OF-SERVICE STATISTICS

SENATOR LAUTENBERG: By State list the number of vehicles and drivers placed out-of-service in Fiscal Years 1987, 1988, and 1989.

ANSWER: The number of vehicles and drivers placed out-of-service are listed by State and year as follows:

State/ Terr.	Out-of-Service Vehicles			Out-of-Service Drivers		
	1987	1988	1989	1987	1988	1989
Alabama	1,916	5,123	7,385	270	1,613	1,924
Arkansas	5,789	10,545	8,903	1,383	2,095	2,443
American Samoa	144	424	584		47	81
Arizona	4,364	1,682	4,461	2,323	1,139	2,404
California	9,300	15,238	14,189	420	1,241	1,573
Colorado	10,511	13,816	15,209	2,790	3,207	3,902
Connecticut	6,354	9,809	10,151	347	668	680
Delaware	2,001	1,663	1,715	309	450	565
Florida	19	22,101		8	4,823	
Georgia	10,015	16,661	15,232	2,848	4,254	5,230
Guam		446	814		58	82
Hawaii	111	788	1,500	7	5	80
Iowa	9,842	9,411	9,717	2,259	1,727	2,153
Idaho	2,934	2,967	2,202	767	1,532	1,015
Illinois	13,284	14,702	11,187	3,721	2,733	1,526
Indiana	17,124	17,571	17,651	2,148	2,180	2,010
Kansas	6,789	6,229	6,286	620	701	1,105
Kentucky	35,973	23,253	29,210	948	789	1,142
Louisiana	3,583	6,677	9,620	824	1,788	2,862
Massachusetts	4,005	5,268	5,127	1,576	935	1,185
Maryland	4,445	11,976	11,061	738	2,042	1,830
Maine	3,291	3,800	3,792	99	270	642
Michigan	16,287	19,141	15,977	1,076	1,672	1,549
Minnesota	7,540	10,155	8,336	460	1,077	403
Missouri	20,899	21,271	27,455	4,729	4,193	7,023
Mississippi	693	2,470	5,985	260	691	1,026
Montana	1,483	2,409	2,510	253	1,573	1,554
North Carolina	19,321	20,444	18,957	1,838	2,854	2,496
North Dakota	2,085	1,869	1,694	393	500	497
Nebraska	831	3,763	5,092	142	1,449	2,103
New Hampshire	1,121	1,698	2,907	241	1,006	1,558
New Jersey	10,251	10,545	11,429	2	1,514	3,958
New Mexico		40	1,700		1	282
Nevada	2,694	3,103	2,998	343	598	500
New York	8,357	21,695	24,546	646		1,551
Ohio	22,402	32,945	27,607	6,222	9,499	7,315
Oklahoma		783	2,107		237	868
Oregon	9,320	6,608	6,569	383	512	792
Pennsylvania	18,963	18,989	18,766	4,852	5,510	2,921
Puerto Rico	946	1,195	1,150	381	26	99
Rhode Island	1,574	2,594	2,461	280	685	629
South Carolina	3,236	3,787	7,687	596	474	1,156
Tennessee	43,084	45,623	55,380	6,026	6,023	10,452
Texas						
Utah	4,464	4,849	4,888	207	354	695
Virginia	2,236	5,096	5,685	605	1,661	1,637
Vermont			186			10
Washington	11,447	15,254	14,378	251	1,595	1,413
Wisconsin	4,138	9,847	7,096	2,076	4,635	2,901
West Virginia	4,922	4,513	4,590	987	513	1,396
	370,088	470,836	474,132	57,654	83,149	91,218

Alaska, South Dakota, Wyoming, the District of Columbia, the Virgin Islands, and the Northern Marianas are not included in the table because they did not participate in MCSAP implementation for the years 1987 through 1989. Where blanks appear the State or Territory did not participate in the implementation phase of MCSAP during the fiscal year, with the exception of New York and Texas, which were in implementation but did not report out-of-service data in selected years.

SENATOR LAUTENBERG: In addition to the numbers of out-of-service, what is the percentage of vehicles and drivers placed out-of-service as a result of roadside inspections? (List by State for Fiscal Years 1987, 1988, and 1989.)

ANSWER: The percentage of vehicles and drivers placed out-of-service compared to the total number of inspections is listed below by State and year:

Percent Out-of-Service

	Vehicles			Drivers		
State/ Terr.	1987	1988	1989	1987	1988	1989
Alabama	38.0%	28.2%	38.5%	5.3%	8.9%	10.0%
Arkansas	22.1%	34.5%	33.0%	5.3%	6.9%	9.1%
American Samoa	56.9%	41.2%	33.6%		4.6%	4.7%
Arizona	19.3%	24.4%	41.6%	10.3%	16.6%	22.4%
California	29.6%	51.5%	44.2%	1.3%	4.2%	4.9%
Colorado	33.2%	42.5%	36.5%	8.8%	9.9%	9.4%
Connecticut	58.7%	60.6%	60.3%	3.2%	4.1%	4.0%
Delaware	51.5%	38.9%	43.0%	8.0%	10.5%	14.2%
Florida	27.1%	55.9%		11.4%	12.2%	
Georgia	55.1%	54.5%	47.2%	15.7%	13.9%	16.2%
Guam		32.1%	23.3%		4.2%	2.3%
Hawaii	17.2%	29.2%	30.5%	1.1%	0.2%	1.6%
Iowa	46.2%	32.8%	31.0%	10.6%	6.0%	6.9%
Idaho	25.1%	15.4%	14.2%	6.6%	8.0%	6.6%
Illinois	18.8%	22.5%	20.9%	5.3%	4.2%	2.9%
Indiana	47.5%	43.6%	42.6%	6.0%	5.4%	4.9%
Kansas	60.4%	51.5%	48.8%	5.5%	5.8%	8.6%
Kentucky	60.4%	46.2%	37.3%	1.6%	1.6%	1.5%
Louisiana	30.8%	38.7%	36.8%	7.1%	10.4%	10.9%
Massachusetts	31.3%	30.8%	25.1%	12.3%	5.5%	5.8%
Maryland	42.6%	28.9%	45.3%	7.1%	4.9%	7.5%
Maine	76.9%	60.9%	52.8%	2.3%	4.3%	8.9%
Michigan	27.3%	29.6%	27.6%	1.8%	2.6%	2.7%
Minnesota	23.7%	31.6%	32.8%	1.4%	3.3%	1.6%
Missouri	51.5%	49.5%	48.5%	11.7%	9.8%	12.4%
Mississippi	19.4%	29.3%	46.5%	7.3%	8.2%	8.0
Montana	41.5%	15.4%	16.8%	7.1%	10.0%	10.4%
North Carolina	37.4%	30.4%	32.7%	3.6%	4.3%	4.3%
North Dakota	36.4%	27.3%	27.5%	6.9%	7.3%	8.1%
Nebraska	60.6%	35.8%	29.7%	10.3%	13.8%	12.3%
New Hampshire	29.8%	34.0%	28.3%	6.4%	20.1%	15.2%
New Jersey	33.2%	29.1%	31.6%	0.0%	4.2%	10.9%
New Mexico		40.0%	37.2%		1.0%	6.2%
Nevada	29.7%	35.9%	42.6%	3.8%	6.9%	7.1%
New York	35.5%	50.5%	47.5%	2.7%		3.0%
Ohio	25.0%	32.4%	27.4%	6.9%	9.3%	7.3%

Oklahoma		20.6%	25.0%		6.2%	10.3%
Oregon	59.7%	39.5%	38.9%	2.5%	3.1%	4.7%
Pennsylvania	42.1%	39.6%	38.5%	10.8%	11.5%	6.0%
Puerto Rico	81.2%	45.8%	36.8%	32.7%	1.0%	3.2%
Rhode Island	53.7%	49.1%	45.2%	9.6%	13.0%	11.6%
South Carolina	47.3%	44.3%	43.7%	8.7%	5.5%	6.6%
Tennessee	48.3%	47.6%	45.8%	6.8%	6.3%	8.6%
Texas						
Utah	43.5%	48.6%	45.7%	2.0%	3.5%	6.5%
Virginia	60.3%	40.3%	38.8%	16.3%	13.1%	11.2%
Vermont			22.5%			1.2%
Washington	45.6%	27.4%	30.0%	1.0%	2.9%	2.9%
Wisconsin	39.0%	40.6%	37.7%	19.6%	19.1%	15.4%
West Virginia	38.7%	27.6%	19.3%	7.8%	3.1%	5.9%
	36.9%	37.5%	36.4%	5.7%	6.6%	7.0%

QUESTIONS SUBMITTED BY SENATOR BYRD

NATIONAL TRANSPORTATION POLICY

SENATOR BYRD: Mr. Larson, you were very involved in developing the Secretary's National Transportation Policy. To what extent were regional systems like the Appalachian Highway System considered during the development of this policy? Please elaborate.

ANSWER: While the National Transportation Policy enunciated the major themes and policy directions, recommendations that would detail plans for implementation were not laid out. To that extent, regional systems such as the Appalachian Highway System were not singled out for special consideration by the policy.

SENATOR BYRD: The policy talks about "highways of national significance." Is, or would you consider, the Appalachian highway system under this category?

ANSWER: We have no special provisions to declare the Appalachian Highway System a component of the National Highway System. We expect that all, or virtually all, of the Appalachian Highway System will be on the National Highway System.

SENATOR BYRD: How does your "policy" reflect the differences among the states in their ability to raise taxes?

ANSWER: The National Transportation Policy indirectly addresses the issue of differences among states in their ability to raise taxes by recognizing that there are some roads and highways that are of national significance that should be funded primarily from Federal government tax sources. It further proposed to provide additional flexibility to states in making use of Federal transportation funds. The policy explicitly recognizes that "the Federal Government must concentrate most of its transportation resources on facilities and projects that advance the performance of transportation systems of national significance" irrespective of where they are located.

The policy further proposes relaxing "restrictions on the ability of State and local governments to raise revenues and use them for transportation facilities and services, including tolls on highways," and encourages "State and local governments to make use of innovative financing and funding options for transportation to supplement more conventional sources of funds, for example, joint public-private initiatives, benefit assessments on property owners, joint development rights, and other means of capturing the value of transportation projects." Utilizing these funding sources lets each State use its resources as efficiently and effectively as possible to meets its own needs and further reduces dependence on the traditional State tax base.

SENATOR BYRD: West Virginia has one of the highest gasoline, diesel, and alcohol tax rates in the country (almost triple some other States' rates). How is this accounted for in your "policy"; i.e., is a State rewarded for doing all that it can in this areas? Are low taxing States treated differently than those that impose a higher tax? If so, how? If not, how did the "policy", allow for these types of decisions being made?

ANSWER: The National Transportation Policy does not propose to reward the States with high State tax rates. The policy is designed to give individual States and local governments as much latitude as possible in meeting their highway and transportation needs. The States and local governments draw upon many revenue sources for highways including motor fuel and motor vehicle taxes and fees. The policy, while encouraging greater reliance on user charges, does not discourage non-user revenues for highways. Indeed, the policy advocates greater use of innovative financing including private sector sources.

SENATOR BYRD: Though West Virginia may have one of the highest fuel taxes in the country, the gross tax receipts may not be enough to meet its needs. Under your "policy," would you still expect the State to raise its taxes and not enjoy some assistance from the Federal Government?

ANSWER: Under the National Transportation Policy we do not intend to abandon the Federal-aid highway program. As we proceed to reauthorizing legislation, we anticipate a shift of emphasis and consolidation of the current categories of Federal-aid programs into fewer, broader programs with greater flexibility. The Federal assistance should be concentrated on highways of national significance. To achieve this we will be developing apportionment formulas that will meet the needs of the restructured programs, be equitable among the States, and assure that States will not suffer losses in Federal funds when compared to current Federal-aid highway funding levels.

SENATOR BYRD: The Administration has called for increased user fees at the Federal level in the aviation, rail and Coast Guard areas. If increased user fees were appropriate in these areas, why not in the highway area, i.e., an increased Federal fuel tax?

ANSWER: The Federal-aid highway program is totally supported by highway-user taxes (which are dedicated to the Highway Trust Fund) except for a few special demonstration projects which are funded from the general funds. We believe the proposed levels of the programs to be proposed can be adequately funded from the existing Federal highway-user taxes and so while we may propose extension of these taxes we do not anticipate needing a tax increase to support the program that will be proposed.

HIGHWAY NEEDS

SENATOR BYRD: Mr. Larson, I am sure you are aware of the tremendous backlog of unmet highway funding needs facing this nation. By all accounts, these needs require billions of dollars of additional funding annually if we are to reverse the deterioration of our nation's highways and bridges. Yet, the President's budget for 1991 shows a decrease in highway spending of over $400 million below the 1990 level.

SENATOR BYRD: What is the justification for this real cut in highway spending?

ANSWER: The justification for this cut in spending is the overriding concern with the Federal budget deficit. Deficit reduction is a national priority and Trust Fund spending can not be exempted in dealing with that issue.

SENATOR BYRD: New authorizations will be required for highway and bridge rehabilitation programs for fiscal year 1992. Do you anticipate requesting increased authorization levels in that legislation?

ANSWER: Yes. We are developing a reauthorization proposal that includes substantially higher program levels.

SENATOR BYRD: Will additional user fees be requested? If not, why not?

ANSWER: Additional fees are not being requested. In accordance with the National Transportation Policy, we are proposing revisions to the program to focus higher levels of Federal funds on a smaller system of major highways and bridges. We are also providing additional authority and flexibility to the States for roads of lesser national significance. Adjustments in matching requirements are expected to leverage additional State and local funds for highway capital improvements. The combination of higher Federal and State funding should increase total funding available for highways without additional user fees. We propose to provide increased flexibility in the current toll provisions by allowing Federal-aid funding to be used for certain toll facilities.

SENATOR BYRD: When can Congress expect to receive the Administration's new highway authorization bill?

ANSWER: We have been working with the Office of the Secretary to develop the Department's proposed comprehensive legislation and, at this date, I cannot tell you when the submittal will be made.

SENATOR BYRD: The Federal Highway Administration, in the June 1989 Status of the Nation's Highways and Bridges: Conditions and Performance, estimated that an investment of $93 billion will be needed between now and the year 2005 to replace or rehabilitate these deficient bridges. This will require a minimum of $3.5 billion annually -- yet we are spending less than one-third of that amount.

SENATOR BYRD: How can we leverage additional resources to address these problems? List your suggestions as reflected in your proposed reauthorization.

ANSWER: At this point, the Administration does not have a reauthorization proposal. Regarding the bridge example, the $93 billion estimate would be required to eliminate all the current backlog of bridge deficiencies. However, we believe that a carefully developed bridge management plan to identify critical bridge problems and program them for remedial work, will enable States to manage the bridge problem without requiring radical user fee increases. We are not suggesting that all highway and bridge needs can be accommodated without substantially higher fees. We are suggesting that needs can be handled effectively by a restructuring of jurisdictional responsibility and continued funding committment by all units of government and the private sector, where possible.

SENATOR BYRD: According to the Federal Highway Administration, more than 41 percent of the 577,710 bridges included in the 1988 national bridge inventory are either structurally deficient or functionally obsolete.

In West Virginia, there are 6,513 bridges. Of this number, 2,795 are structurally deficient, and 1,196 are functionally obsolete.

SENATOR BYRD: What have you done to address these problems?

ANSWER: In recognition of the declining condition of the Nation's bridges, the Special Bridge Replacement Program was established in 1970. This was superseded in 1978 by the Highway Bridge Replacement and Rehabilitation Program (HBRRP). Since its inception the HBRRP has been used to fund improvements to 28,714 bridges (through June 30, 1988).

The $93 billion includes costs for widening, rehabilitation, and replacement of all existing and accruing bridge deficiencies (all Federal-aid and local roads). Currently, annual expenditures for replacement and rehabilitation alone are around $3.5 billion.

With the help of this program, the total number of deficient bridges in the nation is declining. Since 1983, this number has declined from 260,303 to 238,357. Nationwide, between December 1986 and June 1988, the number of deficient bridges declined by 5,289. In West Virginia during this same period, the total number of deficient bridges increased by 29. While the problem remains large, progress nationwide is being made.

SENATOR BYRD: What particularly concerns me is that, in the face of this deterioration, the administration has proposed a Federal-aid highway obligation ceiling which is far less than the obligation ceiling established for fiscal year 1983.

SENATOR BYRD: How are we going to stem infrastructure decline if the administration refuses to spend the money generated by the users?

ANSWER: Infrastructure needs and the budget deficit are competing national issues that must be managed together. Once the deficit problem is resolved, we will move more aggressively into the infrastructure area, by managing the system and by improving system performance through major new capital investment. Those who pay user fees -- that is, virtually all Americans, since almost all of us ride in automobiles or fly in airplanes at various times -- have an interest in a great deal of the rest of the Federal budget, as well, although that interest does not justify the diversion of user fees to support general Federal spending. The needs of our transportation systems are real, and Secretary Skinner, the heads of our operating administrations, and I have been and will continue to be forceful advocates for meeting those needs both within the Administration and before Congress.

SENATOR BYRD: In your opening, you state that the pavement condition on the rural portion of the Interstate highway system declined slightly between 1985 and 1987. Why was this?

ANSWER: The declining pavement condition on rural Interstate highways that was experienced between 1985 and 1987 can be attributed to two major factors. The first is the large growth in travel on the rural Interstate system. Rural Interstate highways account for less than 1 percent of total highway mileage while carrying 9 percent of total travel. In 1985, travel on rural Interstate highways reached 154 billion vehicle miles travelled (VMT). In 1987, this figure rose to 172 billion VMT. This change in travel, 11.5 percent, was topped only by urban Interstate highways and urban other freeway & expressways. By comparison, total travel on all functional systems increased by 8.4 percent. The second reason for the decline in pavement condition is a shifting of priorities that is taking place within many State DOTs. In the years immediately following the passage of the Surface Transportation Assistance Act (STAA) of 1982, pavement projects received top priority. As a result, the trend of declining pavement condition that was evident in the late 1970s and early 1980s was reversed. At present, high congestion levels are forcing many State DOTs to place capacity projects over pavement projects on their priority lists. In the future, States will continue to prioritize highway projects according to perceived need.

SENATOR BYRD: What is the administration doing to help the more rural States stop this decline, especially since these States often do not have their own resources or tax base?

ANSWER: The Administration recognizes that certain rural States often make a higher than average tax effort to meet highway needs. In addition to encouraging more diversified funding mechanisms, the Federal-aid highway program aids many rural States in meeting their needs by way of the "sliding scale" provisions in Title 23 USC for those States with large national reservations such as forests, and parks. For these States, the Federal share of participating projects is above the established shares given in enabling legislation.

NATIONAL COUNCIL ON PUBLIC WORKS

SENATOR BYRD: The Public Works Improvement Act of 1984 created the National Council of Public Works Improvement. Last year, this council present its final conclusions and recommendations to the President and Congress.

SENATOR BYRD: Are you familiar with this work? In the highway area, the council reported that the "needs of most rural and smaller systems exceed available resources." I know that's true in my home State of West Virginia. How does your 1991 budget request address this problem?

ANSWER: Yes, we are familiar with this work. The 1991 budget does not specifically address that problem. We are considering options to address the problem in 1992 reauthorization legislation through a combination of program changes, including increased Federal funding on a smaller national highway system, retention of sliding scales, and increased State flexibility in the use of Federal funds on lower order roads. Additionally, we have under review proposals to vary matching provisions in order to focus available funds for system preservation and leverage additional funds for highway and bridge investment.

TRUST FUND

SENATOR BYRD: How would you rate the overall health of the Highway Trust Fund?

ANSWER: I would rate the overall health of the Highway Account of the Highway Trust Fund as excellent with respect to both its cash position and its sufficiency to meet commitments under current law. The balance in the Highway Account as of April 30, 1990 is estimated at $11.5 billion. At the same time, commitments against the Highway Account are estimated at $39.4 billion. The income (tax receipts and interest) over the next few years will be more than sufficient to meet these and any other commitments under current law.

SENATOR BYRD: At the end of the existing highway authorization and attendant tax collection, what is the projected trust fund balance?

ANSWER: As you know, under current law, our authorization of funds continues through Fiscal Year (FY) 1991 for all Federal-aid highway programs and FY 1992 for Interstate Construction only, while the Highway Account of Highway Trust Fund and its taxes continue through the end of FY 1993. At that time, we estimate that the Highway Account would be about $7.8 billion over and above what it would need to pay commitments against the Highway Account under current law. However, this occurs only if there are no new Federal-aid highway authorizations or extensions of the Highway Trust Fund.

SENATOR BYRD: Since these funds would not be encumbered, how would you propose that they be spent?

ANSWER: Consistent with Secretary Skinner's National Transportation Policy, we envision the introduction and enactment of highway authorization and highway financing legislation that will utilize the funds to which you are referring. So, while it is true that an amount exists over and above what would be required under current law, these funds will be needed to meet future commitments for FY 1992 and beyond.

TIMBER BRIDGE TECHNOLOGY

SENATOR BYRD: In last year's Senate report accompanying the 1990 appropriations bill, I was able to secure a $500,000 earmark to further research on low-cost timber bridges. What is the status of that effort?

ANSWER: On January 10, 1990, representatives of the Federal Highway Administration (FHWA), the U.S. Department of Agriculture (USDA) Forest Service, the American Association of State Highway and Transportation Officials (AASHTO), and West Virginia University (WVU) met to form the Timber Bridge Research Council (TBRC). This council will guide the timber bridge program and coordinate research with other agencies. Representatives from the National Association of County Engineers (NACE) and industry have also joined the Council.

The TBRC held its second meeting on March 19, 1990, at the USDA Forest Products Laboratory in Madison, Wisconsin. There, a list of timber bridge research needs was developed. The list has just been presented to AASHTO's Technical Committee on Timber Bridges at its annual meeting in May 1990. With its endorsement, the program will be implemented at the WVU Constructed Facilities Center.

The FHWA Procurement Office is now negotiating the contract with WVU. Discussions with the university indicated it could not use all of the funding in 1990. Hence, $300,000 will be obligated this year and $200,000 will be obligated in fiscal year 1991. It will probably take 4 years to complete the work.

SENATOR BYRD: Does FHWA regularly monitor the adequacy and efficiency of the already built timber bridges?

ANSWER: The Federal Highway Administration monitors the National Bridge Inventory which applies the National Bridge Inspection Standards to all structures defined as bridges, located on all public roads. Information on inspection procedures, frequency of inspections, qualifications of personnel, inspection reports and inventory is available. For example, the inventory (National Bridge Inventory) has data on approximately 578,000 structures. Approximately 53,200 of these structures are considered timber bridges. FHWA has determined that the number of deficient timber bridges is 43,668.

SENATOR BYRD: Does FHWA have enough data regarding timber bridges and/or wood composites to evaluate them against the characteristics (both performance and cost) of metal bridges?

ANSWER: Yes, the capabilities and performance of both steel and timber bridges are well known to FHWA. This research will, however, shed new light upon the performance of timber, especially in regard to the use of stressed timber as a replacement for nail-laminated. We anticipate that the use of stressed-timber tee-beams will extend and expand the usage of timber bridges.

SENATOR BYRD: Does FHWA have in place the ability to transfer data regarding timber bridges to practicing field engineers?

ANSWER: In the past, the FHWA has published volumes of "Standard Plans for Highway Bridges." The 1979 revised edition of Volume III of the "Standard Plans for Highway Bridges" is entitled Timber Bridges. These plans are intended to serve as a useful guide to State, county, and local highway departments in the development of suitable and economical bridge designs. The plans are particularly valuable to the smaller highway departments with limited engineering staffs.

SENATOR BYRD: Has FHWA worked with AASHTO (American Association of State Highway Transportation Officials) about the development of design methodologies and construction techniques of timber bridges for AASHTO bridge specifications?

ANSWER: No. The AASHTO Highway Subcommittee on Bridges and Structures has a Technical Committee on Timber Structures (T-16); however, the FHWA is not represented on this technical committee.

QUESTIONS SUBMITTED BY SENATOR HARKIN

BRIDGES

SENATOR TOM HARKIN: What does the Department expect to receive in requests for the discretionary bridge program in the coming year, FY 91? And, assuming that this discretionary program remained unchanged, what would be your estimate of requests that you would receive in the FY 92 and FY 93?

ANSWER: Competition for the limited discretionary funding has always been strong. In recent years, the States have submitted candidates totalling between $600 - $800 million annually. FHWA estimates requests totalling between $700 - $800 million annually in FY 91, FY 92 and FY 93.

SENATOR TOM HARKIN: I believe that it would be helpful for the committee to have certain historical data from the Federal Highway Administration. For each of the past three fiscal years and for this fiscal year, how many bridges received discretionary bridge funds and how many dollars were distributed in each year by each rating factor? And, for each of those years how many bridge applications for how many dollars were not funded by each rating factor?

ANSWER: The information requested has been provided earlier in the Discretionary Bridge Program tables (Funded Projects, FY 1987 through FY 1990; Unfunded Projects, FY 1987 through FY 1990).

SENATOR TOM HARKIN: Of the discretionary bridge projects that were funded last year, what is the total dollar cost of each bridge that was funded. I do not need the names or places of the bridges.

ANSWER: The following table lists discretionary bridge projects that were funded to date in fiscal year 1990. The table includes both continuing (previously funded) projects and new (previously unfunded) projects. The total amount allocated to date in FY 1990 is $202,789,888

Project Bridge Name	Amount Cost Estimate *	Allocated FY 1990
Million Dollar	$ 126,000,000	$ 8,400,000
Brooklyn	245,800,000	31,700,000
Manhattan	318,500,000	5,520,000
Cochrane	110,800,000	12,056,300
Franklin Street	59,600,000	10,792,000
Main Avenue	53,800,000	38,878,000
Burlington	56,850,000	30,180,000
Clark (US67)	81,000,000	26,400,000
SR115/MoR	7,400,000	5,900,588
Old Williamstown	26,600,000	1,500,000
Weirton/Steuben.	54,300,000	400,000
Grassy Sound	58,200,000	10,263,000
Pasco Kennewick	3,200,000	800,000
Sixth Street	25,000,000	20,000,000
	$1,227,050,000	$202,789,888

* The project cost estimate is the total cost of the discretionary portion of the project. In some cases, this is not the true total cost because some projects are partially funded from other sources.

QUESTIONS SUBMITTED BY SENATOR MIKULSKI

MCSAP INSPECTION VERIFICATION

SENATOR MIKULSKI: FHWA claims that funds spent on verification activities may divert resources from the inspection function of MCSAP. Follow-up and compliance is just as important as the quantity of inspections. What evidence does FHWA have that a random verification program could not be implemented in a cost effective manner?

ANSWER: A high level of compliance with out-of-service orders is critical to the continued integrity and basic operation of the MCSAP. Efforts are directed towards developing cost-effective procedures for reinspection and verification. FHWA is concerned that a mandated reinspection program would divert resources from the primary inspection responsibility.

BRIDGE DETERIORATION

SENATOR BARBARA A. MIKULSKI: Is it true there are bridges in Maryland which are structurally and functionally obsolete that do not qualify for Federal Highway Bridge Funds according to the sufficiency ratings?

ANSWER: Bridges must be deficient to qualify for Highway Bridge Replacement and Rehabilitation Program (HBRRP) funds. Bridges must meet prescribed condition and appraisal ratings from inspections, in addition to having sufficiency ratings less than 80. There are structures in Maryland and in other States that do not meet that criteria and, therefore do not qualify.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

DRUG PROGRAM

SENATOR D'AMATO: What plans does FHWA have to make Operation DIAP which is your drug enforcement program, a permanent part of Motor Carrier Safety Assistance Program?

ANSWER: Drug interdiction and awareness activities will continue to be eligible for funding under MCSAP.

SENATOR D'AMATO: How will you assure there is sufficient funding to support an effective effort?

ANSWER: FHWA will evaluate drug interdiction and awareness activities included in State Enforcement Plans. FHWA will fund those requests that represent an effective effort.

SENATOR D'AMATO: What have been the accomplishments of this program?

ANSWER: FHWA has trained 3,100 State and local law enforcement officers. In addition to numerous arrests, the training has led to eight major seizures, totalling 8,677 pounds of marijuana, 1,163 pounds of cocaine, and $702,994 in currency from commercial motor vehicles.

SENATOR D'AMATO: If it is so successful, why didn't FHWA ask for funding to support drug interdiction activities in its FY 1991 requests?

ANSWER: Drug interdiction and awareness and training activities are now eligible under the MCSAP. States may include these types of activities in their State Enforcement Plans. FHWA expects to address drug interdiction and awareness activities in its reauthorization proposal.

SENATOR D'AMATO: How does FHWA coordinate its drug awareness and training activities with those fostered by NHTSA?

ANSWER: FHWA and NHTSA staff meet regularly to minimize overlap in this area. In addition, FHWA drug awareness training activities are conducted in accordance with NHTSA standards.

SENATOR D'AMATO: Why hasn't the $1 million appropriated in the FY 1990 Appropriations Act for drug enforcement activities related to motor carriers been allocated yet to the States?

ANSWER: Almost $400,000 has been obligated. FHWA is negotiating with States to obligate the remaining funds.

SENATOR D'AMATO: When will this occur and for what purposes?

ANSWER: FHWA expects to obligate the funds this year. Programs will address drug interdiction and awareness.

SENATOR D'AMATO: How is alcohol use a concern of the Operation DIAP activities?

ANSWER: State and local law enforcement officers under DIAP also check for illegal use of alcohol.

TRUCK INSPECTIONS

SENATOR D'AMATO: A spokesman for the New York State Police states that there is a pressing need for more training of State truck inspectors on the hazardous materials transportation regulations. What is FHWA doing to respond to this need?

ANSWER: FHWA has increased its number of hazardous materials courses offered at the Transportation Safety Institute. This will result in expanded opportunities to train State personnel.

SENATOR D'AMATO: What else do you plan to do?

ANSWER: FHWA field staff participate in regional hazardous materials teams and help provide training to hazardous materials personnel.

INSPECTION

SENATOR D'AMATO: FHWA claimed that funds spent on verification activities may unwarrantably divert resources from the primary inspection function of the Motor Carrier-Safety Assistance Program. Isn't quality of inspection and its follow-up just as important as quantity?

ANSWER: FHWA is interested in achieving high quality in all MCSAP inspections, and assuring that all defects are fixed. The overall goal is to remove as many unsafe vehicles and drivers from the highways as possible.

SENATOR D'AMATO: Isn't assurance that compliance was achieved just as important as generating more inspection results?

ANSWER: Assurance of compliance is an important aspect of MCSAP. States are managing their inspection programs effectively.

SENATOR D'AMATO: What quantitative evidence does FHWA have that a random verification program could not be implemented in a cost effective manner?

ANSWER: The reason for moving cautiously on this issue is that we do not wish to see MCSAP States spending excessive resources on an area which may not represent a significant problem in that State.

SENATOR D'AMATO: How would FHWA set up a cost-effective verification effort that does not depend on industry self certification?

ANSWER: FHWA will carefully review the suggested policy and procedures being developed by the Commercial Vehicle Safety Alliance to address this issue.

FHWA HEARING

SENATOR D'AMATO: Please discuss the changes and improvements that have been made during the last year in FHWA'S SCE, CAPE, ETA and hazardous materials transportation program. For each of these program activities, what challenges remain and what is FHWA doing about these?

ANSWER: Several significant improvements have taken place in the past year. On May 1, 1990, the FHWA issued procedures for declaring all or part of a motor carrier's operations an imminent hazard and requiring the motor carrier to cease the affected operations until it comes into compliance with the Federal Motor Carrier Safety Regulations. FHWA is working with the Commercial Vehicle Safety Alliance (CVSA) to assure that States which wish to conduct the more detailed compliance reviews can do so in a manner which is compatible with the Federal compliance review as well as initiate enforcement cases as a result of those compliance reviews. This is in addition to the work over half of the States are now doing in the less detailed safety review. The SAFETYNET program has matured to the point that we used vehicle inspection data from those States which transmit their data to the FHWA data base as a factor in selecting motor carriers for on-site visits in the current program year. The Commercial Accident Prevention and Evaluation Program (CAPE) has been modified this year to include medium and large motor carriers that would have received a "satisfactory" safety rating except for their accident history. Motor carriers in the CAPE program work with us on preventable accident countermeasures in the effort to reduce their accident rates. FHWA will continue to involve those States willing to expand their safety programs into a fuller partnership with our federal activities. In the coming year the FHWA Drug Testing Rule will cover drivers of all interstate motor carriers. Ensuring compliance with this new requirement will be a high priority. Finally, FHWA is working at the international level with the governments of both Canada and Mexico to broaden the areas of cooperation and explore reciprocal agreements for accepting compatible inspections and reviews.

402 PROGRAM

SENATOR D'AMATO: If the Motor Carrier Safety Assistance Programs were reauthorized with sufficient funds, would FHWA oppose paying for traffic enforcement coupled with Level III inspections as an eligible expense?

ANSWER: FHWA would need to carefully consider proposals to broaden MCSAP eligibility for day-to-day traffic enforcement activities.

SENATOR D'AMATO: Please summarize the experience that various States have had in coupling traffic enforcement with Level II and III inspections.

ANSWER: Several States have provided Level II and III inspection training for enforcement personnel who do not normally conduct roadside inspections. The end results are increased driver out-of-service actions and greater enforcement presence for commercial vehicle operators.

WEIGHT ENFORCEMENT ACTIVITIES

SENATOR D'AMATO: The option of allowing Motor Carrier Safety Assistance Program (MCSAP) funds to be used to encourage the states to increase their weight enforcement activities is currently being considered by FHWA. What is the empirical scientific evidence in the literature that show that a truck being overweight is a major causal factor in accidents? Please cite specific references and their conclusions.

ANSWER: The primary objective of weight enforcement is to ensure that pavement and bridge structures on the Federal-aid highway systems do not deteriorate prematurely due to excessive axle loads or gross vehicle weight. Weigh stations identify both excessive gross vehicle weight and axle loadings. Safety is another benefit of the weight enforcement activities. Weight enforcement activities should be integrated with safety enforcement as the two elements are interrelated, but incidental, factors in heavy truck accidents.

A finding of the recent Transportation Research Board's Truck Weight Study on the effects of truck operating weight and configuration on accident rates is that without changes to other vehicle factors increased truck weights would increase their ~~accident~~ accident involvement rates.

R. M. Clark, et. al., in the Heavy Truck Safety Study, identified many interrelated factors which contribute to truck accidents. The report indicates that operating practices such as cargo loading and gross weight of a truck can affect the vehicle's safety performance by reducing the margin of safety of its operating performance capabilities.

MOTOR CARRIERS

SENATOR D'AMATO: Based on a review of various State Enforcement Plans (SEPs), it appears that some States are not using Motor Carrier Safety Assistance Program (MCSAP) funds to educate the public about the need to share the road safely with the motor carrier industry. What is the FHWA policy about the use of MCSAP funds for educational activities directed at the motoring public?

ANSWER: Educational activities directed at the motoring public are eligible under MCSAP.

SENATOR D'AMATO: What specific written guidance has FHWA given MCSAP States on this issue?

ANSWER: Written guidance is not needed.

SENATOR D'AMATO: Approximately how many States use MCSAP funds to help educate the public about sharing the road with the motor carrier industry? Please describe the scope and nature of these activities.

ANSWER: Some States use videotapes and distribute informational literature in the form of handouts and posters. The motoring public is also informed through local trade journals, newspapers, and magazines. However, FHWA does not have accurate records of MCSAP expenditures for these purposes.

RANDOM INSPECTIONS

SENATOR D'AMATO: Please discuss in detail what the out-of-service rate for both drivers and vehicles is for random inspections conducted every quarter versus the usual Motor Carrier Safety Assistance Program (MCSAP) inspections. Present specific data for the quarterly experiments conducted during FY 1989 and those conducted thus far this year.

ANSWER: For all random inspections conducted during FY 1989, 37.8% of the vehicles and 5.4% of the drivers were placed out of service. So far in FY 1990, these rates are 32.7% and 6.6%, respectively. The overall out-of-service rate for FY 1989 was 36.4% for vehicles and 7.0% for drivers. Thus far in FY 1990, 33.8% of the vehicles and 6.7% of the drivers have been placed out of service during routine MCSAP inspections.

SENATOR D'AMATO: In how many States does the rate go up during random inspections?

ANSWER: During FY 1989, 50% of the reporting States experienced higher vehicle out-of-service rates during the random inspections, while 35.3% of them reported higher driver out-of-service rates.

QUESTIONS SUBMITTED BY SENATOR KASTEN

NATIONAL HIGHWAY SYSTEM

SENATOR KASTEN: Can you give us some insight as to the thinking of the FHWA as you look toward the next highway bill? The American Association of State Highway and Transportation Officials and others look toward a system of nationally significant highways beyond just the interstate system. It is my understating that DOT/FHWA foresees the same approach. Can you comment on this?

ANSWER: The National Transportation Policy stated that the Federal government should concentrate more of its resources on the facilities and projects that advance the performance of the national transportation system. Where the Federal government is funding, operating, and regulating areas that are not necessary or appropriate, that involvement should be reassigned or eliminated. This will obviously require some restructuring of Federal-aid programs. The FHWA's proposal will reflect this policy, focusing more on a system of roads that are of national significance.

HIGHWAY TRUST FUND

SENATOR KASTEN: We hear that the Highway Trust Fund has a balance in the billions of dollars that could be spent on highway projects. Do you agree that there are unspent dollars sitting idle which could be used?

ANSWER: There are two important figures in any discussion of the Highway Account of the Highway Trust Fund: the cash balance and the commitments. As of April 30, 1990, the Highway Account had a cash balance of approximately $11.5 billion; as of the same date, commitments against the Highway Account for obligated projects underway and unobligated balances that will be carried into the future were $39.4 billion. Thus, the cash balance is not a "surplus" since there are commitments already made that will have to be paid using this balance.

SENATOR KASTEN: We hear of proposals to increase the Federal gas tax by 50 cents a gallon or more. This idea has become even more prominent during the present "budget summit". Is the U.S. D.O.T. against the use of transportation user fees for deficit reduction?

ANSWER: Yes, we would oppose such a tax. While a tax increase of 50 cents a gallon on gasoline might have some beneficial effects on the budget deficit, it would have detrimental effects in other ways. Several studies have shown that fuel tax increases would result in slower economic growth and reductions in other tax revenues. A gas tax increase of this magnitude would particularly harm lower wage earners, families with both spouses working, and residents of States who have to drive long distances. Further, such a tax would inhibit the ability of the States to increase taxes and other highway user fees. Thus, the increase could have a long-term detrimental effect on both the transportation infrastructure and the economy.

QUESTIONS SUBMITTED BY SENATOR DOMENICI

HIGHWAY ON-THE-JOB TRAINING

SENATOR DOMENICI: Would you please provide for the record, a status report on the utilization of this discretionary authority by the States?

ANSWER: To date, no States have utilized the discretionary funds authorized under Public Law 100-164.

SENATOR DOMENICI: In view of the upcoming reauthorization of the surface transportation programs, including highways, beginning in FY 1992, this language was made effective through the upcoming fiscal year (FY 1991). Do you anticipate any additional States utilizing this discretionary authority in FY 1991.

ANSWER: Eighteen States have expressed an intent to utilize these funds in FY 90 and FY 91. These States are:

Alaska
Connecticut
Florida
Indiana
Louisiana
Maine
Massachusetts
Michigan
Missouri
New Jersey
New Mexico
New York
Ohio
Oregon
Puerto Rico
Rhode Island
Vermont
Washington

Another 11 States have expressed an interest in utilizing these funds. They are as follows:

Arkansas
Colorado
Delaware
Maryland
Mississippi
Montana
North Carolina
North Dakota
Pennsylvania
South Carolina
South Dakota

SENATOR DOMENICI: Will the Administration consider extending the authorization of this program in its proposed legislation to reauthorize the highway programs? If not, why not?

ANSWER: Yes. The presently drafted Administration reauthorization bill contains language extending this program.

HIGHWAY TRUST FUND

SENATOR DOMENICI: Over the past 10 years, from 1979 to 1989, how has the cash balance changed in the highway account of the Highway Trust Fund? Specifically, please provide yearly totals of the cash balance. Measured in real dollars, how does today's trust fund balance compare to the balance in 1979?

ANSWER: The following are the ending balances in the Highway Account of the Highway Trust Fund ($ million):

Fiscal Year	Ending Balance
1979	$ 12,565
1980	10,999
1981	9,259
1982	9,046
1983	9,062
1984	10,210
1985	10,361
1986	9,486
1987	9,412
1988	9,019
1989	10,551

Based on the Consumer Price Index (CPI), the FY 1990 balance would have to exceed $ 21 billion to have the same real purchasing power as the FY 1979 ending balance of $12.565 billion.

SENATOR DOMENICI: Over the same period of time, what has been the change in the uncommitted balance of the highway account of the highway trust fund?

ANSWER: There is no uncommitted Highway Account balance.The commitments exceed the cash balances in any given year. The following are the commitments in excess of balances in the Highway Account of the Highway Trust Fund($ million):

Fiscal Year	Commitments In Excess of Balance
1979	$6,403
1980	8,742
1981	10,463
1982	10,212
1983	14,982
1984	16,555
1985	18,833
1986	20,338
1987	21,390
1988	21,830
1989	21,129

SENATOR DOMENICI: For the 10 years, 1980 through 1989, what have been to the total level of highway outlays from the trust fund? For the same period, what has been the level of tax collections from the public credited to the trust fund?

ANSWER: The following are the Highway Account outlays and tax receipts for the years requested ($ million):

Fiscal Year	Outlays	Tax Receipts
1980	9,212	6,620
1981	9,174	6,305
1982	8,035	6,743
1983	8,838	7,777
1984	10,384	10,507
1985	12,756	11,800
1986	14,180	12,251
1987	12,802	11,793
1988	14,038	12,836
1989	13,602	14,358

SENATOR DOMENICI: Should interest credited to the highway trust fund be considered a sort of user fee, as was recently suggested by Senator Moynihan in a Environment and Public Works hearing on the highway trust fund?

ANSWER: No, the interest credited to the Highway Account of the Highway Trust Fund, while a legitimate part of the Highway Account, should not be considered a user fee. The funds credited to the Highway Account as interest represent an intra-governmental transfer of funds from the general funds of the Treasury, which come from all taxpayers, not just highway users.

QUESTIONS SUBMITTED BY SENATOR GRASSLEY

NATIONAL TRANSPORTATION POLICY

SENATOR GRASSLEY: You have been very active in the development of the National Transportation Policy which Secretary of Transportation Skinner recently released. What do you see as the major theme of this policy as it relates to our highway system?

ANSWER: The Policy has six major themes, all of which we consider very important in relationship to the highway program:

- Rebuilding and expanding the national transportation system
- Providing a sound financial base for transportation
- Keeping the transportation industry strong and competitive
- Supporting public safety and national security

- o Protecting the environment and quality of life
- o Advance U. S. transportation technology and expertise

In the reauthorization legislation we are developing, we expect to have provisions that correspond directly to each of these themes.

IMPLEMENTATION OF CDL

SENATOR GRASSLEY: Iowa is in the process of implementing the National Commercial Driver's License. How is the implementation proceeding nationwide? What benefits do you see from the implementation of CDL? What are some of the problems other States are having in the implementation?

ANSWER: Forty-five States have passed and signed into law enabling legislation for their CDL programs. The remaining States and the District of Columbia have either passed their legislation, but have not signed into law (i.e. Pennsylvania and Alaska) or have bills that are being considered (Massachusetts, New Jersey, District of Columbia and Rhode Island). There are 13 States issuing CDLs.

The benefits of the CDL program are already noticeable. The problem with multiple licenses is waning as States begin implementing their CDL testing and licensing programs and become part of CDLIS. The testing requirements associated with the CDL program have provided an incentive for drivers to become more safety conscious and more knowledgeable about safe driving practices. Training schools, too, have begun to upgrade their training programs to better prepare commercial drivers meet the new standards.

Challenges still facing some States include linking with CDLIS; licensing all commercial drivers by April 1, 1992; and developing testing options for drivers who have problems in reading or taking tests. FHWA believes that all States will meet the deadlines.

NATIONAL SPEED LIMIT

SENATOR GRASSLEY: A national speed limit of 55 m.p.h. was enacted during the oil crisis, with revisions in later years to allow 65 m.p.h. on rural interstate and other freeways. What is the position of the FHWA concerning a national speed limit? Shouldn't the setting of speed limits be left to the States so they might apply decision for speed limits based on local considerations?

ANSWER: I support the past position of the Agency which is that the ability to establish maximum speed limits on all highway systems without the threat to the use of their full share of Federal Highway funds should be returned to the States. We have confidence in the States to establish proper speed limits based on their more intimate knowledge of local conditions. As a secondary position, if repeal of the National Maximum Speed Limit is not possible, I support a process whereby each State would certify that all speed limits are posted in accordance with congressionally mandated maximum values, and would eliminate data collection and reporting, as well as compliance standards.

QUESTIONS SUBMITTED BY SENATOR HATFIELD

SENATOR HATFIELD: Mr. Larson, as you are well aware, a great deal of attention has been given to Secretary Skinner's effort to establish a new national transportation policy. I am impressed by his leadership but am concerned, however, that restructuring the present method of allocating highway dollars might obscure the fundamental need to maintain the main artery of this nation - our Interstate system. It is my understanding that, even now, we fall short of what's necessary to maintain the system. Already, our roads and highways are falling into disrepair faster than funds are being appropriated to fix them. Recent reports conducted by the GAO, CBO, OTA, the National Council on Public Works Improvement, the American Association of State Highway and Transportation Officials, the National Governor's Association, and numerous others, all have recognized the problems we are facing and recommend doubling our current investment in maintenance just to keep the Interstate in its present condition - let alone provide for economic growth.

SENATOR HATFIELD: I have heard that it might take as much as $4.8 billion each year to maintain the Interstate System while we are currently spending in the neighborhood of $2.8 billion. Do you have any estimates of the amount of funding needed to adequately maintain the current Interstate System?

ANSWER: As reported in our 1989 biennial report to the Congress "Status of the Nation's Highways and Bridges: Conditions and Performance", total capital investment levels of between $4.7 and $6.1 billion in 1987 dollars will be required annually through 2005 to maintain 1985 conditions on the Interstate System. This range reflects average annual rates of travel growth of 2.0 percent and 3.0 percent, respectively. An additional $1.3 billion annually is required to repair or replace deficient Interstate System bridges.

SENATOR HATFIELD: According to GAO testimony before the House Public Works Committee last month, the amount of pavement classified as "good" on the Interstate decreased from 62% in 1981 to 57% in 1988; the amount of fair pavement increased from 25-31%; poor pavement remained at about 12%. GAO says these numbers equate to a situation wherein the ride on 42% of the nation's premier highway system is barely tolerable or worse. They go on to say that DOT's estimate of future 4R needs through 2005 is based on maintaining 1985 conditions when 41% of the roadway was in fair or poor condition. Is this true? And if so, why hasn't DOT and FHWA updated its estimate of what is required to maintain the system adequately?

ANSWER: The cost to maintain conditions is a basic benchmark measure for assessing program needs. It has been reported consistently as a status quo investment strategy without suggesting that such a strategy is optimal or appropriate.

In the case of the Interstate System, average pavement conditions are already at such a high level that further reductions in the amount of pavement rated in poor condition would require high concentrations of pavement investment, at the expense of critically needed capacity improvements. The statement that 42 percent of the system is "barely tolerable or worse" is useful if properly stated.

Pavements rated in fair condition provide a safe and acceptable ride without inflicting significant wear and tear on vehicles. While the existence of fair condition pavements is not necessarily a problem, the increasing extent of pavement in the "fair" category is cause for concern. The buildup in fair pavements portends a large future investment effort as these pavements approach the poor category through continued deterioration. The 42 percent statistic correctly suggests the importance of continued high levels of pavement investment to prevent the increasingly "fair" rated pavements from slipping into the "poor" category", a condition that is associated with uncomfortable rides and significant vehicle wear and tear.

SENATOR HATFIELD: If you updated your cost estimates to reflect the condition of the Interstate in 1989 with a gaol of assuring that at least 50% of the system was in "fair" condition, how much would we need to spend nationwide on Interstate 4R programming?

ANSWER: The Investment levels cited earlier of from $4.7 to $6.1 billion per year for Interstate improvements would yield significantly higher levels of pavement performance, depending on the share of the investment devoted to pavements. At these levels of investment, which vary according to future travel growth forecasts, States will be able to improve average pavement conditions and meet a large measure of capacity needs. If pavement needs were the only concern, average annual investments of from $1.8 to $2.3 billion in constant 1987 dollars would suffice to eliminate poor pavements. The cost to eliminate all poor pavements and to reduce the amount in the fair category is unknown, but would undoubtedly be substantially higher than the $4.7 to $6.1 billion estimates. Such a pavement policy would absorb all Interstate System funding without addressing capacity needs.

SENATOR HATFIELD: Mr. Larson, It is my feeling right now that any new "flexibility" or creation of new system of national highways can not come at the expense of the current Interstate system. It has been suggested that until we start spending down the trust fund or until we increase the revenues going into the trust fund that there should be no program restructuring. This would mean that with an expanded pot of money we could get creative, but with the current severely restrained resources we have to do the job by "playing it straight" with the nation's roadways. What do you think of this proposal?

ANSWER: We are reviewing several options for program structure, each of which emphasizes the overriding importance of safeguarding the Federal investment in the Interstate System. Regardless of the program structure or the revenue flow into the trust fund, we do not intend departing from that emphasis.

NATIONAL TRANSPORTATION SAFETY BOARD

STATEMENT OF JAMES L. KOLSTAD, CHAIRMAN

ACCOMPANIED BY:

BERNARD S. LOEB, DIRECTOR, OFFICE OF RESEARCH AND ENGINEERING

LLOYD F. MILLER, ACTING MANAGING DIRECTOR

INTRODUCTION OF WITNESS

Senator LAUTENBERG. Now we would like to bring Mr. James Kolstad, Chairman of the National Transportation Safety Board, to our witness table.

Mr. Kolstad, thank you very much for your appearance here this morning. We took a little bit longer than we had intended to, but we are happy to have you here. It will take us just a minute to get some order.

We would want to hear what the Chairman is going to say. Sir, we invite you to give your testimony in a relatively abbreviated form. But do cover it. We will take your full statement for the record.

OPENING STATEMENT

Mr. KOLSTAD. Fine, Mr. Chairman. Thank you very much.

It is a pleasure to appear before you this morning.

I would like to introduce my senior staff who are with me this morning.

To my right is Mr. Lloyd Miller, the Acting Managing Director. To my left is Dr. Bernie Loeb, who is Director of the Office of Research and Engineering.

For many years, the Safety Board has been faced with a declining staff level, while its workload has become increasingly voluminous and complex. As Chairman, my goal is not only to stem, but to reverse, this gradual erosion of the Board's resources, which are critical to the continued effectiveness of our accident investigation and safety recommendation activities.

Indeed, my No. 1 priority is to strengthen and rebuild the Safety Board.

REORGANIZATION

In that regard, Mr. Chairman, I recently announced a major restructuring of the Board's staff, the first such action in almost 14 years.

Our new structure, I think, will accelerate our investigations and strengthen our safety recommendation process.

Briefly, I have organized the staff along modal responsibilities. The Board's Bureaus of Accident Investigation, Technology, Field

Operations, and Safety Programs have been restructured into four new offices. First, all aviation accidents, from major airliners to the smallest general aviation aircraft, are now investigated by the Office of Aviation Safety. We are also hiring technical writers, to speed the issuance of our accident reports, which now often take more than 1 year to complete. I think that is too long.

Second, the Office of Surface Transportation Safety is now responsible for investigating accidents in the railroad, highway, marine, and pipeline modes.

Third, the Office of Research and Engineering is comprised of technical staff who have multimodal responsibilities, such as the metallurgy and data recorder laboratories, and the Safety Studies Division.

Fourth, a new Office of Safety Recommendations has been established. Safety recommendations are the culmination of the Board's many efforts. Achieving our mission of improving safety is, in great part, dependent upon getting our recommendations adopted. I expect this Office to focus more on implementation of our recommendations.

BUDGET REQUEST

The Board is requesting $30.94 million for fiscal year 1991, which is $3.7 million more than our 1990 postsequester level of $27.2 million. This additional level will enable us to fund the equivalent of 348 positions, or 22 more than our fiscal year 1990 level of 326.

Our need for more positions has reached critical proportions. Indeed, the Safety Board has been attempting to carry out its responsibilities in an environment of more frequent major accidents and more complex accidents.

INVESTIGATION WORKLOAD

Last year's investigatory load provided an excellent example of the problem. We launched 51 go-teams to major accidents in all modes of transportation, the highest number of launches in many years, or almost one a week.

With this level of activity, it is nearly impossible to provide the time and resources necessary to train and maintain the proficiency of nine investigators in dealing with increasingly complex transportation vehicles. The unique failure of a titanium front fan disk on a United DC-10, which led to the accident in Sioux City, IA, and the failure of a cargo door on a United Boeing 747, which made a safe landing in Honolulu, are but two examples of the kind of accidents that have required an inordinate amount of time and resources because of their complex nature.

Recently, we participated with the Indian Government in the investigation of an Airbus A-320 accident. This is perhaps the most technologically advanced aircraft on the market. With additional resources in fiscal years 1991 and 1992, we can address the double mission of more investigations and more complex investigations.

We can also greatly improve the quality and timeliness of our reports and recommendations and improve the efficiency and effectiveness of the Safety Board.

RESOURCES

Here is the way we would dedicate these resources. Nine of these positions would be dedicated to enhancing the staffing depth of several of our critical technical specialties like those involving cockpit voice recorders, digital flight data recorders, and structural engineering. An additional nine positions will be allocated to enhance our investigator staffing depth. Five of these positions are required for the Board's major aviation, railroad, and highway programs.

These additional positions will also improve the Safety Board's ability to respond to major foreign accidents. These foreign accidents typically involve U.S. airlines and/or U.S.-manufactured aircraft, and are often significant because of safety issues which could affect the safety of the U.S. fleet and American passengers.

Four of these investigators will be allocated to enhance our investigation of general aviation and surface accidents, which often result in significant safety improvements.

Finally, four positions will be allocated to our aviation appeals program to reduce the current processing time of our appeals cases from almost 20 months to a more acceptable 12 months.

APPEALS

As a result of an increase of enforcement actions taken by FAA, appeal of those actions to the Safety Board has doubled, resulting in an unacceptable backlog of cases.

It is expected that incoming cases will reach the 1,500 level by fiscal year 1991. This not only poses a threat to the FAA's enforcement efforts, but it also creates a serious potential safety hazard, since the action taken against a pilot is postponed until a final disposition of the case.

I believe the Safety Board plays a major role in our transportation system.

With the support of this committee, Mr. Chairman, I am confident that we will be able to improve on our goal of providing independent, efficient, and effective investigations and achieve substantial safety improvements with a minimum burden on the American taxpayer.

This concludes my statement, Mr. Chairman. I would be more than happy to respond to any questions.

PREPARED STATEMENT

Senator LAUTENBERG. Thank you very much, Mr. Kolstad.

As I said, your full statement will be included in the record. It goes into a lot of detail. I think it is a very good statement, and I applaud your efforts to put some more scope and direction in the Department. I think it has served the country well.

[The statement follows:]

STATEMENT OF JAMES L. KOLSTAD

Mr. Chairman, I am pleased to be here today to represent the National Transportation Safety Board and to discuss the Safety Board's fiscal year 1991 appropriations request.

Before I begin a review of the past year's activities, I would like to acknowledge the National Transportation Safety Board's senior management staff seated with me and to commend each of them for their accomplishments during a difficult past year. On behalf of my colleagues and my staff, I want to thank each of you and the other Members of this Committee for your continued interest and support in the Safety Board's activities.

AVIATION

AVIATION STATISTICS

While the total accident rates for U.S. air carriers and commuters declined in 1989, the fatal accident rates rose. The actual number of fatal accidents for air carriers was the highest since 1968.

Unfortunately, last year aviation accidents were also fatal to two Members of Congress—Congressman Mickey Leland on August 7, in Ethiopia, and Congressman Larkin Smith on August 13, in Janice, Mississippi. In addition, the Safety Board lost a Board Member, Joe Nall, in an airplane crash in Venezuela on November 27, 1989. This marked the first time in the Safety Board's history that a Board Member has been fatally injured in a transportation accident.

During 1989 the major U.S. scheduled airlines suffered 24 accidents, of which eight involved 131 fatalities. Of major tragedy, of course, was the July crash of the United Airlines DC-1O in Sioux City, Iowa killing 111 persons. The charter airlines also suffered a large number of fatalities. There were four accidents, three of them fatal, resulting in 147 fatalities. All but three of those deaths occurred in the Independent Air Boeing 707 accident in the Azores last February.

The Safety Board is confronted with a wide variety of issues resulting from our accident investigations during 1989. These issues include pilot training and experience, aging aircraft, human factors in flight operations and maintenance and inspection, air traffic control operations, the DC-10 hydraulic system design, and Federal Aviation Administration surveillance and oversight. Another issue that continues to concern us, in all modes of transportation, is the use of drugs and alcohol.

PILOT TRAINING AND EXPERIENCE

In the last three years, the Safety Board has seen wide variations in crew performance. We have seen two flightcrews bring airplanes with major structural damage down safely. We saw another crew respond to an emergency that one could not possibly train for—an engine failure with a complete loss of hydraulic flight controls. On the other hand, we have had two, possibly three accidents, in which cockpit crews have failed to assure a proper airplane configuration before taking off.

It is distressing that in 1989 we had to talk about the need for cockpit crews to ensure that flaps and slats are extended for takeoff. I am referring to Northwest 255 in Detroit, Michigan in August 1987, and Delta 1141 one year later in Dallas.

The Safety Board has determined that the Delta and Northwest accidents were caused, in part, because of the Captain and First Officer's inadequate cockpit discipline which resulted in the flightcrews' attempt to take off without the wing flaps and slats properly configured.

More recently, last August a crew of a TWA 727 in New Orleans began the takeoff roll down the wrong runway and overran the end by 1300 feet before finally becoming airborne and striking a light control box and shearing off the tops of trees.

In September 1989, a USAir 737 came perilously close to disaster when it struck power lines 80 feet above the ground 1½ miles from a runway while on approach to Kansas City. Cockpit discipline is one of the main issues in the investigation.

And more recently, of course, is USAir 5050 which, during the same month, overran a runway during a rejected takeoff attempt at LaGuardia. The aircraft came to rest with the nose wedged atop an approach light trestle and with the fuselage broken and partially submerged in deep water; two passengers died in the accident. The captain had been qualified as captain on the aircraft for two months, and the first officer for one month. The Safety Board's investigation of this accident is not complete; therefore, the relevance of the pilots' training and experience in this accident have not been determined. However, the adequacy of pilot training, FAA oversight of such training, the pairing of pilots with limited experience, and crew coordination are among the issues being examined in this accident.

On August 11, 1989, in correspondence with the FAA regarding National Aviation Safety Priorities, the Safety Board expressed concern for flightcrew training and urged the FAA to emphasize improvements in flightcrew training programs. The Safety Board has also recommended that the FAA establish minimum experience levels for paired crews and order airlines to conduct more thorough background checks on pilot applicants, including training records.

Although general aviation accidents continue to decrease, the percentage of accidents that involve pilot error as a cause or factor remains relatively constant. The FAA continues positive measures to improve pilot training and proficiency, however, the Safety Board believes that continued emphasis is needed to reduce pilot error accidents.

FAA SURVEILLANCE AND OVERSIGHT

Evidence of continuing deficiencies in FAA oversight of airline operations has come to the Board's attention as a result of major accident investigations during 1989.

FAA surveillance and oversight was found to be a contributing factor in the Delta Airlines crash at Dallas in 1988. The Safety Board determined that the lack of sufficiently aggressive action by the FAA to have known deficiencies corrected by Delta and the lack of sufficient accountability within the FAA's air carrier inspection process contributed to the crash.

The issue of adequacy of FAA oversight was again raised following the crash of a sightseeing airplane in Waipio Valley, Hawaii last June. As a result of its investigation of this accident, the Safety Board issued two safety recommendations regarding sightseeing operations to the FAA. Further concern about FAA oversight was generated during our investigation of the Aloha Island Air crash in Molokai. All 20 persons on board were killed in that accident. Earlier, in 1988, the Aloha Airlines decompression focused attention on the quality of air carrier maintenance programs and the FAA's surveillance of those programs.

Finally, inadequate surveillance by the FAA of aircraft manufacturers was found to be a contributing factor in the United Airlines flight 811 rapid decompression following a cargo bay door opening on a Boeing 747 just south of Honolulu in February 1989. Following the accident, the Safety Board issued three recommendations to the FAA regarding the design and operation of the cargo door. Following our recent findings, the Safety Board issued an additional ten safety recommendations on emergency response procedures and cabin safety to the FAA.

AGING AIRCRAFT

The airworthiness of the U.S. aging aircraft fleet is an issue justifying continued and emphasized attention by the airlines, airframe manufacturers, and the FAA. The average airplane of the U.S. air carrier fleet is more than 12 years old. More than 500 airplanes (Boeing 727s and McDonnell Douglas DC9s) are more than 20 years old. Here are several examples of aging aircraft problems.

In June 1989, a United Airlines mechanic in Denver noticed a crack about five inches long extending below a lap joint just below the windows of a Boeing 727-100 airplane. The airplane had been delivered to United in 1964 and had flown more than 62,000 hours. Upon closer inspection the crack was found to be about 20 inches long, most of which was hidden by the overlapping skin of the joint. It appears that the crack initiated and progressed through fatigue through rivet holes in an area where the adhesive in the lap joint had become disbonded. Since there had been no previous indications of a problem with this particular lap joint, inspection and repair requirements had not been imposed.

Cracking was found on the fuselage of an early line number Boeing 737 in September of 1989. Investigation revealed that the visually detected cracking was part of a 35-inch long crack that was largely hidden by overlying skin of the lap joint just below the windows.

These occurrences emphasize the need for continued attention to the aging aircraft issue.

More than any other single event, the Aloha Airlines decompression focused and crystallized the attention of the industry and the regulators on the issue of aging airplanes. Most of the effort in this area has been the result of the joint industry task force led by the Air Transport Association, and the Aerospace Industries Association with the help of the FAA.

These efforts have led to the issuance of proposed rules to mandate modifications and part replacement on several models of airplanes as they approach their service life. The National Transportation Safety Board will continue to address our concerns, including the issuance of safety recommendations when appropriate.

HUMAN FACTORS IN FLIGHT OPERATIONS AND MAINTENANCE AND INSPECTION

Over the past decade, human error has been a cause or factor in 65 percent of fatal air carrier accidents and an even higher percentage of general aviation accidents. The role of human performance is also seen in air traffic control operational errors and in errors in various maintenance activities.

Improved human performance is a major concern of the aviation industry and Congress. In its July 1988 report, "Safe Skies for Tomorrow," the Congressional Office of Technology Assessment suggested that Congress direct the Federal Aviation Administration to allocate resources for human factors and establish an agency focal point. Subsequent legislation, the Aviation Safety Research Act of 1988, mandates that FAA conduct human factors investigations, including long-term research. The Safety Board has strongly supported this legislation.

In response to these developments, FAA Administrator Busey established a Human Factors Coordination Committee in September 1989 to serve as a focal point for all Agency human factors initiatives and to formulate policy recommendations to its Executive Board.

The Safety Board is greatly encouraged by the developments to date. We will continue to monitor these efforts and their effects on safety and will make appropriate recommendations to the FAA as the need arises.

COLLISION AVOIDANCE—AIR AND GROUND

The Safety Board believes that the continuing occurrences of runway incursions and near midair collisions, with their potential for a catastrophic collision, represent two of the most serious problems facing commercial aviation operations today. While there has been a great amount of attention given to the airborne collision problem, the Safety Board believes that there has been insufficient attention given to the prevention of collisions on the airport surface during takeoff and landing operations.

During 1985 and early 1986, the Safety Board investigated 25 runway incursion incidents. We found that the incursions were the result of both controller errors and pilot deviations. A number of recommendations addressing such issues as controller coordination procedures, training, pilot-to-controller communications and airport signing were issued to FAA.

The FAA accepted many of these recommendations. However, even with the increased awareness of the problem, runway incursions continue to occur, some of which have resulted in accidents.

Most recently, on January 18, 1990, an Eastern Airlines Boeing 727 collided with a Beech 100 at Atlanta's Hartfield International Airport. Although there were no injuries on the Eastern airplane, the Beech was destroyed and the two persons aboard were killed.

The Safety Board believes the potential for similar accidents will increase as the number of operations at existing airports increase.

AIR TRAFFIC CONTROL OPERATIONS

On February 13, 1989, an operational error resulted in the loss of standard air traffic control separation between a British Airways Boeing 747, and an American Airlines British Aerospace 146, when both airplanes passed near the Seal Beach, California VORTAC at 9,000 feet.

A special investigation of this incident conducted by the Safety Board of Coast Terminal Radar Approach Control (TRACON) identified numerous deficiencies and problems related to air traffic control operations. These deficiencies and problems included inadequate size and poor physical condition of the operational quarters, inadequate controller staffing, excessive use of overtime, improper airspace design, procedures, and training programs, and an inadequate program for quality assurance and safety oversight of the air traffic control system.

After completing it's special investigation, on May 23, 1989, the Safety Board issued 11 safety recommendations to the FAA. In November 1989, the FAA announced that four air traffic control facilities that exist within southern California, including the Coast TRACON, will be combined and relocated in San Diego.

Air traffic control, specifically controller training and human factors issues, is of major concern to the Safety Board. For example, in the January runway incursion accident in Atlanta, the Beech and the Eastern airplanes had been cleared to land by the controller. However, the local controller stated he was distracted by another Eastern airplane and thought the Beech aircraft had cleared the runway, although he did not see it do so.

Also in January, at Houston International Airport, a Continental Airlines Boeing 727 elected to go around when, on short final after having been cleared to land, he saw another Continental Boeing 727 begin to taxi off the runway.

Several years before, in 1985, one of the worst near disasters in the U.S. occurred when two Northwest DC-10s nearly collided at Minneapolis-St. Paul International Airport. The pilot of one of the DC-10s, cleared to take off, averted a collision with the other DC-10, which had been cleared to cross the runway, by rotating the airplane early.

DC-10 HYDRAULIC SYSTEM

As a result of the Safety Board's investigation of the United Airlines DC-10 accident in Sioux City, Iowa, McDonnell Douglas has developed hydraulic system enhancements which would prevent the loss of hydraulic fluid in the empennage of the DC-10. In the unlikely event of another catastrophic engine failure, control ability of the airplane could be maintained by isolating sheared or damaged hydraulic tubes in one of the airplanes three hydraulic systems, thus preventing total hydraulic loss. This investigation is still underway, and the Safety Board will make safety recommendations as it deems them necessary.

FIELD INVESTIGATIONS

During the past year the Safety Board investigated approximately 2,167 general aviation accidents. The great majority of these accidents were handled by Safety Board investigators in ten regional offices around the Nation. The field staff also conducted 11 major accident investigations, and 200 air carrier, commuter and air taxi investigations in 1989. Although most of the investigations are not as publicly visible as those catastrophic accidents investigated by headquarters, they do have a significant impact on transportation safety.

For example, during 1989 a Piper Cub experienced an in-flight separation of the left wing near Jacksonville, Arkansas, and a Piper Tri Pacer experienced an inflight separation of the right wing at Moose Lake, Minnesota. Internal corrosion was found in both of these investigations. In response to Safety Board recommendations, the FAA recently issued an Airworthiness Directive to require annual inspections. Twenty thousand aircraft are affected by this action.

Another Piper airplane accident investigation by the Safety. Board led to additional safety recommendations to the FAA and an Airworthiness Directive requiring inspection, rigging, repairs and modification of the forward baggage compartment door on certain Piper models was issued. Approximately 4,200 aircraft were affected by this action.

Other field investigations include:

A Piedmont Airlines Boeing 737 that experienced an inflight separation of an engine from the wing as the airplane departed O'Hare Airport, and returned safely with only one engine.

A collision of a DC-8 and an unmanned Boeing 727 parked on the ramp at Dayton International Airport.

A DC-9 owned by Evergreen International Airlines which made an emergency landing in Lubbock, Texas after the copilot found the pilot dead in the unpressurized cargo bay.

FOREIGN ACCIDENT INVESTIGATIONS

Because of the growing number of U.S.-manufactured and U.S.-registered airplanes operating overseas, and the Safety Board's role as the sole U.S. accredited representative at foreign accident investigations under the provisions of the International Civil Aviation Organization (ICAO), U.S. manufacturers and operators rely heavily upon the Board to facilitate their involvement in the investigation of foreign incidents and accidents. In addition to the direct safety benefits realized from foreign accident investigations, the Board's involvement provides a critical contribution both to U.S. foreign relations and to strengthening the Nation's balance of trade posture through aviation exports. Significant foreign investigations in which the Safety Board participated during 1989 were:

On January 8, a British Midland Airways Boeing 737 crashed shortly after takeoff from London's Heathrow Airport, killing 44 persons. This investigation is ongoing.

On February 8, an Independent Air, Inc. B-707 crashed on descent to Santa Maria Island in the Azores, Portugal. All 144 persons on board were killed.

On February 19, a Flying Tigers 8-747 struck a hill while on approach to the airport in Kuala Lumpur, Malaysia. The flight was operating as a cargo flight. All four persons aboard the airplane were killed.

In both of the preceding instances, a misunderstanding apparently involved altitude clearances in the terminal area. As a result, the Safety Board issued recommendations to the FAA concerning foreign airport operations and flightcrew training for foreign flight operations.

On May 20, the Board assisted the government of Peru in the investigation of the accident of a U.S. operated Cessna Caravan involved in the drug eradication program in Peru.

On June 7, a Surinam Airways DC-8 crashed near Parmaribo, Surinam, on a flight from Amsterdam, the Netherlands. Of the 184 persons onboard, 177 were killed in the accident. The airplane was operated by a United States flightcrew. The captain was not properly qualified to operate the airplane in revenue passenger transport in either the United States or in Surinam, however, the airline and government aviation regulators were not informed of this fact by the firm supplying the crew.

On August 7, the flight carrying Congressman Mickey Leland and 13 others crashed enroute to a refugee camp in poor weather. All on board received fatal injuries.

On September 3, a VARIG Airlines Boeing 737 crashed in the Brazilian jungle. Eleven passengers were killed in the accident.

The Safety Board sent accredited representatives and technical specialists to investigations of the UTA DC-10 that crashed in the desert over Niger on September 19, 1989 and the Avianca Boeing 727 that crashed following takeoff from Bogota, Columbia on November 27, 1989. The Board's teams helped both investigating authorities determine that explosive devices, which had been placed onboard the airplanes, caused the accidents. Over 270 passengers and crew were killed by the saboteurs in the two accidents.

On October 21, 1989, a Honduran Boeing 727, operated by Tan Sahsa Airlines crashed while on approach to Tegucigalpa, Honduras. Of the 146 passengers and crew onboard, 135 were killed in the accident.

On November 27, a Cave Airlines chartered sightseeing flight crashed on approach to Caracas Airport in Venezuela. The two pilots and Safety Board Member Joseph Nall received fatal injuries.

The Safety Board continues to monitor several other ongoing foreign investigations for potential safety issues affecting U.S. aviation safety. Currently, the Safety Board is involved in more than 60 active foreign cases, many of which have directly led to safety improvements in U.S. aircraft operations.

RAILROAD

As a result of Safety Board investigations of railroad accidents, we have found the most pressing areas of need in improving rail safety are passenger car and locomotive crashworthiness, crew fatigue, alcohol and drugs, collision avoidance, hazardous materials and the regional railroads.

In 1989, the Safety Board investigated six major railroad accidents: On February 2, in Helena, Montana, a collision and derailment of Montana Rail Link freight train with locomotive and hazardous materials release; on February 26, in Akron, Ohio, the derailment of a CSX Transportation Co. train that touched off a fire and forced a mass evacuation of people from homes and schools; on March 10, the collision of New York City Transit Authority trains; on May 12, in San Bernardino, California, the derailment of a Southern Pacific Transportation Co. freight train, followed by a pipeline rupture on May 25 at the site of the derailment; on July 22, in Freeland, Michigan, the derailment of a CSX transportation freight train and hazardous materials release; and on December 12, the collision of an Amtrak commuter train and a tractor trailer truck.

The Safety Board recently investigated the Southeastern Pennsylvania Transit Authority (SEPTA) commuter train accident in Philadelphia in which three passengers died and 95 persons were injured.

PASSENGER CAR AND LOCOMOTIVE CRASHWORTHINESS

Passenger car safety issues include the adequacy of seat locking mechanisms, luggage restraints, and the securement of food service appliances.

The main issue in the crashworthiness of locomotive cabs is the lack of a standard sill height which frequently results in fatal injuries when locomotives collide, even at low speeds.

CREW FATIGUE

Crew fatigue and other human performance issues pertaining to train operating personnel, train dispatchers and tower operators are issues which concern the

Safety Board. The Safety Board has recommended certain changes in the Hours of Service Act providing for mandatory breaks, off-duty periods and better supervision to enhance safety.

ALCOHOL AND DRUGS

Impairment from alcohol or drug use on railroads continues to be a factor in railroad accidents. The Federal Railroad Administration has advised that in 1989 there were 21 accidents and incidents involving alcohol or drug use by railroad employees in which 24 employees tested positive. The Safety Board is encouraged that during the past year, the Association of American Railroads has asked its members to inform all employees of the availability and capabilities of their employee assistance programs (EAP) on an ongoing basis. This official AAR notification, resulting from the Safety Board's study entitled, "Alcohol/Drug Use and its Impact on Railroad Safety," will ensure that all railroad employees are informed of the nature and availability of EAP services, especially the assistance available in dealing with substance abuse. The Board's study found that there was considerable variation among the railroads as to the availability and distribution of EAP information.

The Safety Board is continuing to monitor the effectiveness of the Federal Railroad Administration's Alcohol and Drug regulations as they are applied in rail operations throughout the industry.

COLLISION AVOIDANCE

The Safety Board has recommended that the FRA take an active role in developing advanced train control systems (ATCS) so that positive train separation becomes a part of any ATCS adopted by the industry.

RAILROAD/HAZARDOUS MATERIALS

The transport of hazardous materials by rail continues to warrant the Board's close attention. Examples include the February 2, and February 26, 1989, accidents in Helena, Montana and Akron, Ohio, and the July 22, 1989, accident at Freeland Michigan. Each accident resulted in the release of hazardous materials and the evacuation of residents.

As a result of the Helena accident, the Safety Board recommended that the DOT evaluate present safety standards for tank cars transporting hazardous materials by using safety analysis methods and modify existing regulations to achieve acceptable levels of safety for each product/tank car combination.

The Safety Board also reiterated to the Federal Railroad Administration, the Research and Special Programs Administration, and the American Association of Railroads its previous recommendations for headshields on aluminum tank cars, and it urged that action be expedited to require this protection. The investigation of the accidents at Akron, Ohio and Freeland, Michigan are still underway.

In addition, the Safety Board is conducting a safety study on "Transportation of Hazardous Materials by Rail" that will focus on other issues identified in Safety Board investigations.

NEW YORK CITY TRANSIT AUTHORITY

On March 10, 1989, a two-car revenue collection train standing in 103rd Street Station was struck by a passenger train on the New York City Transit Authority's (NYCTA) IRT line. As a result of its investigation of the accident, the Safety Board found that the fail-safe protection of the signal system at the 103rd Street Station had been eliminated by the installation of a jumper wire that had been installed in the signal circuitry as an expedient repair for a broken track circuit wire. When a second track wire broke, the signal system no longer provided a warning to a train entering the Station that another train was already in the Station. The Board also found deficiencies in NYCTA's repair procedures. Further, the Board learned that trains did not contain speed-indicating devices and the NYCTA was not properly enforcing its operating rules, including speed restrictions. Eleven recommendations were made by the Safety Board to the NYCTA to correct these and other problems identified in this investigation.

During 1989, several significant safety improvements for passengers riding within the NYCTA system were implemented. In response to prior Board recommendations, the NYCTA developed firm procedures to limit train lengths, thereby reducing the strain put on working motor control groups. Also in response to an earlier recommendation, the NYCTA implemented a number of changes in their training procedures, including a maintenance supervisor training program.

REGIONAL RAILROADS

Results from the investigation of a 1988 railroad accident involving two Iowa Interstate freight trains and the Helena, Montana accident indicate that a broad range of potential safety issues may have developed with the proliferation of the regional railroads.

Both railroads involved in these accidents were recently formed to take over portions of major railroad systems and fall within the category of "regional" railroads, of which there are currently about 90 in the United States. About two-thirds of these have been formed since 1982. In the aggregate they embrace about 30,000 route miles of rail lines in 46 of the 49 continental states. As a result, in April 1989, the Safety Board approved a proposed study of safety on regional railroads.

HIGHWAY

In the highway mode, the Safety Board's attention has focused on three areas: bridge safety, school bus safety and the operators of heavy trucks.

The Safety Board during 1989 began investigations of four major highway accidents and completed a number of others.

BRIDGE SAFETY

Our investigations in 1989 included two bridge collapses: On April 1, the collapse of bridge spans in Covington, Tennessee resulting in eight occupant fatalities; and on May 26, the collapse of temporary bridge spans in Miamitown, Ohio, resulting in at least two fatalities.

As the Nation's highway system matures, the Safety Board is becoming increasingly concerned about its aging highway bridges.

There are almost 580,000 highway bridges nationwide, of which about 80 percent are over water. During the past six years the Safety Board has investigated the collapse of six major highway bridges over water. Two of these investigations are still underway. The issues in these and other bridge collapses have focused on the adequacy of underwater bridge inspection programs, analysis of inspection data, and Federal oversight of state bridge programs.

For example, the Safety Board has determined that the probable cause of the collapse of a bridge over the Pokomoke River in 1988 was the inadequate response of the Maryland State Highway Administration to deficiencies noted in the underwater bridge inspection reports. Safety recommendations addressing these issues were made to the Maryland State Highway Administration, the Federal Highway Administration, the American Association of State Highway and Transportation Officials, and the International Association of Chiefs of Police.

SCHOOLBUS SAFETY

In May 1988, near Carrollton, Kentucky, a church activity bus was struck head-on by a pickup truck killing the bus driver and 26 bus passengers. As a result of its investigation into this accident, the Safety Board recommended that the National Highway Traffic Safety Administration upgrade current requirements in Federal safety standards for school buses pertaining to emergency egress, seating material flammability, and fuel system integrity. Also, recommendations were made to the 50 states, church organizations, and activity groups to phase out the use of pre-standard school buses and to purchase only post-standard school buses for public transportation purposes.

The Safety Board also recently determined that a contributing factor in a 1987 school bus accident in Florida killing five passengers was the crashworthiness of the school bus.

In September 1989, the Safety Board investigated another school bus/truck collision near Alton, Texas. After impact, the schoolbus went over an embankment and fell approximately 25 feet into a gravel pit partially filled with water. The bus came to rest on its left side totally submerged in water.Twenty one of the 81 students aboard were killed, and 20 others were hospitalized. Although the investigation is still continuing, preliminary results indicate that most of the fatalities appear to have resulted from drowning. Egress difficulties may have been a factor in the number and severity of injuries sustained by the bus occupants.

In 1989 the Safety Board completed a study of the crash performance of small school buses and vans used for school transportation. As a result, the Safety Board issued recommendations to the National Highway Traffic Safety Administration (NHTSA), manufacturers of small schoolbuses and vans, associations of school transportation officials and contractors, calling for improvements in the safety of small school buses.

TRUCK SAFETY

Heavy trucks are involved in about 400,000 accidents each year and represent 12 percent of all highway fatalities. Recent Safety Board efforts in the area of trucking safety have focused on driver performance issues such as fatigue and alcohol and other drug use, cab crashworthiness and brake system maintenance.

In a recently completed study on drug and alcohol involvement in fatal to-the-driver heavy truck crashes, we found that thirty-three percent of the drivers tested positive for drugs and alcohol. Driver impairment from fatigue was the most frequently cited single accident cause or factor, and alcohol and drug use ranked second. The Safety Board has issued safety recommendations to the Department of Transportation, the States and the American Trucking Association to address the safety problems identified in our study.

In the course of investigating heavy truck accidents over the past three years, the Safety Board has also found many drivers fatally injured because of inadequate cab crashworthiness. The Board believes the design of the tractor cab to be structurally inadequate, and will be studying improved restraint systems and the benefits of improved rollover (roof crush) protection.

The Safety Board has also found poorly maintained, malfunctioning or inoperative brakes to be a significant factor in accidents. The Board has recommended that NHTSA publish a final rule by June 1990 to require automatic slack adjusters on all new trucks equipped with air mechanical brake systems which will automatically correct brakes that are out of adjustment. The Board also recommended that the American Trucking Association and the National Private Truck Council ask their members to adopt written policies regarding road brake adjustment.

MARINE

The Safety Board investigated ten major marine accidents in 1989 and adopted five major marine accident reports. In addition, the Board completed a year-long study of the passenger vessel industry. Some of the accident investigations include: The catastrophic grounding of the U.S. Tankship EXXON VALDEZ and the release of crude oil; the collision between the Liberian cruise vessel M/V CELEBRATION and the Cuban bulk carrier M/V CAPITAN SAN LUIS; a fire aboard the U.S. Tankship CHARLESTON; the capsizing and sinking of the lifeboat TITAN; and the explosion/fire involving the U.S. fishing vessel NORTHUMBERLAND and an offshore gas pipeline.

EXXON VALDEZ

Many safety issues have resulted from these accident investigations, especially the EXXON VALDEZ, the worst oil spill in U.S. history. On March 24, 1989, the oil tanker EXXON VALDEZ ran aground in Prince William Sound near Valdez, Alaska. A blood sample taken from the master of the ship almost ten hours after the grounding revealed a blood alcohol content of .061. Prior to the grounding, the master had turned the navigation of the vessel over to a third mate who was not qualified as a pilot in the waters in which the accident occurred.

The issues arising from our investigation include the suitability for service by the crewmembers and Coast Guard personnel on duty at the time of the accident; operation of the Coast Guard's vessel traffic service system; the need for pilotage in Prince William Sound; the performance of the navigation watch of the EXXON VALDEZ; the effectiveness of the response to the oil spill; the effects of fatigue, alcohol abuse and other human factors on watchstanding; and the effectiveness of Exxon's drug rehabilitation program.

PASSENGER VESSEL SAFETY

The Safety Board continues to evaluate the adequacy and enforcement of the Coast Guard regulations that address passenger vessel safety in U.S. waters. However, the Board is also concerned about the safety of U.S. citizens being carried aboard foreign registered cruiseships that operate out of U.S. ports. The Board's concerns for the safety of this segment of the passenger vessel industry result from its lack of jurisdiction to investigate accidents involving these vessels when they are not operating in U.S. waters and the Coast Guard's lesser oversight of these vessels relative to U.S. registered vessels. For example, the Safety Board was not able to complete the investigation into the collision between the Liberian registered cruise vessel

CELEBRATION and the Cuban vessel CAPITAN SAN LUIS off the Coast of Cuba because a Federal court ruled that the Board lacked jurisdiction to investigate this accident. The CELEBRATION carried 1580 passengers, most of whom were U.S. citizens, from Miami to the Caribbean and back to Miami.

On October 11, 1989, the Safety Board adopted a report on its safety study of passenger vessels operating from U.S. Ports. As a result of this study, the Safety Board issued forty-one new recommendations and reiterated a number of previous recommendations.

The Safety Board found that the biggest need for improvement in safety was in the rapidly growing cruise industry dominated by ships that are flagged in foreign countries and do not come under the more stringent U.S. Coast Guard inspection standards. Additionally, as a result of this study, the Safety Board is requesting through our authorizing Committees an expansion of authority to investigate accidents involving a foreign registered passenger vessel occurring in international waters that embarks and disembarks United States' citizens at United States' ports.

The Board's recommendations to the Coast Guard, the National Association of Small Passenger Vessel Owners, the Cruise Line International Association, and the National Association of State Boating Law Administrators, address a number of concerns including: The need for increased Coast Guard safety oversight; the need for crew training and emergency drill requirements; the need to reduce and eliminate language barriers among crewmembers and between crew and passengers; the need for mandatory accident reporting to the U.S. Coast Guard; the need for lifejackets at muster locations in addition to lifejackets located in cabins; the need to apply U.S. Coast Guard alcohol and drug rules to foreign flag passenger vessels; and the need for fire protection safety improvements.

PIPELINE

Based on five pipeline accidents in Kansas and Missouri investigated during 1988 and 1989, older, unprotected metallic gas lines need to be protected against corrosion damage and cast iron gas mains need to be replaced on a scheduled basis. Procedures being used by the gas industry generally comply with the Federal safety standards; however, the Federal safety standards for these pipelines are not adequate and need to be strengthened and clarified so they can be better understood by governmental inspection personnel and by the regulated industry.

In its final report on the five Kansas Power and Light (KPL) accidents, the Safety Board determined that KPL failed to protect the pipelines from corrosion damage and from abnormal external loadings, did not adequately monitor nearby excavations, and failed to effectively train its employees. The Safety Board also found inadequate state oversight of pipeline companies. The Safety Board has issued recommendations to KPL and the DOT addressing these issues.

The Safety Board also issued two safety recommendations as a result of our investigation of the rupture of a pipeline following the derailment at San Bernardino. These recommendations address the need for improved inspection, maintenance and testing requirements.

Another pipeline safety issue concerning the Board is the low frequency electric resistance process for joining longitudinal pipe seams used during the 50s and 60s which often left small openings in the pipe. There is no practical, nondestructive inspection capable of detecting corrosion-weakened sections. Only through periodic hydrostatic pressure testing can these pipelines realistically be evaluated for continued safety service; yet, there is no Federal requirement for such testing.

The current investigation of the accident involving the fishing vessel NORTHUMBERLAND in October has highlighted another pipeline issue of concern to the Safety Board. There are an undetermined number of offshore pipelines in shallow waters that are unburied and thus subject to damage from vessel operations. This endangers the lives of mariners and the ocean environment. Although there are Federal requirements to bury such pipelines during construction, there are no requirements to maintain the burial of these pipelines. The extent of this safety problem is presently unknown. The Safety Board has recommended that the Department of Transportation, with assistance from the Department of Interior, organize and coordinate an effort to determine the danger of offshore pipelines to marine vessels, and to propose effective methods to inspect, maintain, and protect offshore pipelines. The Board also recommended that the Department of Transportation caution marine vessel operators in the Gulf of the possibility of unprotected offshore pipelines.

HAZARDOUS MATERIALS

Hazardous materials safety issues cut across all modes of transportation. Better packaging and hazard identification on shipments, improved hazard identification, and a more complete description of hazardous materials in shipping papers, are important safety needs identified by Safety Board investigations. Additionally, the Board has recommended improvements in the routing of materials that pose substantial threats to communities, both for rail and highway transportation and improved training for fire rescue personnel responding to hazardous materials accidents.

DRUG AND ALCOHOL TESTING

As with hazardous materials, drug and alcohol abuse affects all modes of transportation. The Board is pleased the Department of Transportation now has drug testing rules that cover all modes of transportation. However, the Safety Board is concerned about weaknesses and inconsistencies in these rules. For example, in aviation the rule allows sample collection for drugs as late as 32 hours after an accident or incident, and requires urine samples only. In the rail mode, both blood and urine samples are required as soon as possible after the accident or incident.

The Safety Board has made recommendations to the Department of Transportation calling for uniform regulations for all modes of transportation and of alcohol testing as well as drug testing. Drug and alcohol testing has been an issue in several of the accidents we have investigated.

REORGANIZATION

The National Transportation Safety Board recently announced major restructuring of the Board's staff, the first such action in almost 14 years. Our new structure will streamline our investigations and strengthen our safety recommendation process.

The Board will organize the staff along modal responsibilities. The Board's Bureaus of Accident Investigation, Technology, Field Operations and Safety Programs have been restructured into four new offices:

First—All aviation accidents, from major airliners to the smallest general aviation aircraft, will be investigated by the Office of Aviation Safety. We are also hiring technical writers to speed the issuance of our accident reports, which now often take more than a year to complete. That is too long.

Second—The Office of Surface Transportation Safety will be responsible for investigating accidents in the railroad, highway, marine and pipeline modes.

Third—The Office of Research and Engineering will comprise technical staff who have multimodal responsibilities, such as the metallurgy and data recorder laboratories, and the safety studies division.

Fourth—A new Office of Safety Recommendations will be established. Safety recommendations are the culmination of the Board's many efforts. Achieving our mission of improving safety is in great part, dependent on getting our recommendations adopted, and I expect this office to focus more on implementation of our recommendations.

FISCAL YEAR 1991 BUDGET REQUEST

The Board is requesting $30.94 million for fiscal year 1991, which is $3.7 million more than our fiscal year 1990 post-sequester level of $27.2 million. These resources are sufficient to fund 348 full-time equivalent positions, 22 positions more than our fiscal year 1990 staffing level of 326. These additional positions will be allocated to fill critical needs in our technical, investigative, and appeal programs. They will enable us to respond more effectively to the major safety issues posed by the increasing complexity of the transportation technology in all modes of transportation, and the increasing exposure to risk resulting from the growth of the transportation system. They will enable us, after a prolonged period with no new staff resources, to improve the quality and timeliness of our accident reports and recommendations, the depth of our accident investigations, and the efficiency and effectiveness with which we are able to allocate our resources. To give the Committee a better understanding of how we will use these positions, I would like to describe more specifically the purposes to which they will be put.

Nine of these positions will be dedicated to enhancing the staffing depth of several of our critical technical specialties. This will improve staff morale and will allow these specialists to receive the training necessary to maintain their currency in state-of-the-art technologies, something that our lack of staffing depth has forced us to limit severely.

An additional nine positions will be allocated to enhance our investigator staffing depth. Five of these positions are required for the Board's major aviation, railroad, and highway programs. This not only will improve the scope of our accident investigations and the timeliness and quality of our written reports, but also will increase the number of safety improvement recommendations to correct identified safety problems. The additional positions also will improve the Safety Board's ability to respond to major foreign accidents involving U.S. airlines and U.S. manufactured aircraft, which not only is a necessary contribution to supporting U.S. aviation exports, but also to identifying safety issues which could affect U.S. airline safety.

Four other investigator positions will be allocated to enhance our investigation of non-catastrophic accidents, which often result in significant system-wide safety improvements.

Finally, four positions will be allocated to our aviation appeals program under which airmen whose certificates are revoked, suspended or denied by the Federal Aviation Administration may appeal this action first to an NTSB administrative law judge, and then to the full five-Member Board. These four new positions will enable the NTSB to begin to reduce the current processing time of the cases appealed by airmen from almost 20 months to a more acceptable 12 months. As a result of an increase of enforcement actions taken by the Federal Aviation Administration, appeals of those actions to the Safety Board have doubled, resulting in an unacceptable backlog of approximately 1,000 cases. It is expected that incoming cases will reach the 1,500 level by fiscal year 1991. Without these additional positions, the processing time for these appeals will approach three years. This not only poses a serious threat to the Federal Aviation Administration's enforcement efforts, but also creates a serious potential hazard to the safety of persons and property, since in most cases the action taken against an airman is stayed until final disposition of the case, thus allowing the airman access to the airspace system as if no action had been taken.

The Board plays a major role in maintaining public confidence in our transportation system. Because of your past support of our safety improvement efforts, the Safety Board has been able to accomplish independent, efficient, and effective investigations, and induce substantial safety improvements with a minimum burden on the American taxpayer and without regulatory authority.

This concludes my formal testimony, Mr. Chairman, I would be pleased to respond to questions.

BUDGET REQUEST

Senator LAUTENBERG. Obviously, as our society becomes more complex and there is more congestion, and more use of highways, airways, and rail traffic, the fact is that we are going to run into problems. The best thing that we can do is get accidents analyzed quickly and use that information to help us correct the situation for the future. I was pleased to hear of your commitment to the implementation side of recommendations that you make.

I want to talk about the budget for a moment.

In 1990, this committee appropriated $2 million more than was requested because we were concerned about the personnel shortfalls in critical safety areas.

How did you use that additional $2 million?

Mr. KOLSTAD. We used it to employ two additional FTE's. We had hoped that it would be 15 additional people; however, because of the sequester and of an increase in employee benefits and also because we had to absorb the pay raise, the net result was an increase of only two FTE's.

Senator LAUTENBERG. Now that's not $1 million a person, obviously, because that would be a pretty good grade level, I might say.

Mr. KOLSTAD. No, sir. [Laughter.]

Senator LAUTENBERG. So, how much would you say here? A relatively minor part of that was used for additional staffing. Where was the bulk of it used?

Mr. MILLER. Approximately $700,000 went to the increase for the pay raise, I believe. Another $300,000 went to the increased benefits associated with our personnel costs.

Senator LAUTENBERG. So it was primarily catchup, then, right?

Mr. MILLER. Much of the rest of it was in terms of the sequester reductions.

Yes, sir; it was primarily catchup.

Senator LAUTENBERG. The shortfall in your request last year occurred because OMB had reduced your original request to them by that amount.

This year, the administration is asking for $30.94 million, $3.7 million above the 1990 level. What was your original request of OMB for 1991?

Mr. KOLSTAD. It was 381 FTE's and $35.8 million.

Senator LAUTENBERG. That's $35.8 million. So there is about a $5 million difference there, not quite $5 million.

In what areas did they trim your request down?

Mr. KOLSTAD. Well, of course, they trimmed us in terms of our FTE. We had requested 55 additional FTE's, and we got 22.

Mr. MILLER. We did not get 33 of the total that we requested.

Senator LAUTENBERG. I'm sorry?

Mr. MILLER. We did not get 33 of the positions that we requested for fiscal year 1991.

Senator LAUTENBERG. That's 33 people.

What's an average wage factor there?

Mr. MILLER. Including all of the benefits, I believe it is about $82,000 per employee.

Senator LAUTENBERG. About $82,000. So, if I am correct, that's about $3 million, is that right?

Mr. MILLER. Yes; that's probably pretty close.

Senator LAUTENBERG. I used to be pretty good at arithmetic. But I may be a little off here.

Mr. KOLSTAD. I might point out, Mr. Chairman, that we were particularly pleased because that is the second greatest increase that the Safety Board has had in its history; these 22 additional positions.

BUDGET REQUEST

Senator LAUTENBERG. The question is, Mr. Kolstad, as you know, it is not the size of the increase, it is the size of the base for the task at hand that has to be analyzed.

Again, I think that is part of the catchup as well. As we have expanded all of our transportation systems, there has not been the resource available for your Department to cover the job as thoroughly as we would like to see it.

You have asked for $250,000 to upgrade your mainframe, especially specifically to cover a portion of the software conversion costs associated with the purchase of a more advanced computer. What are the total costs associated with the software conversion? Since I come out of a business that did this for a living, I would ask is this strictly on the software side or is it also hardware? I mean, it's $250,000. I don't want to look like a big spender here this morning, but we are not talking about large sums of money in terms of commitment.

What is that $250,000?

Mr. MILLER. Our total request of the OMB at the time was for $800,000 for our mainframe computer upgrade, and another $125,000 for additional microcomputer hardware. So the $250,000 that we received will enable us only to do certainly a very partial upgrade of our system.

Senator LAUTENBERG. Why isn't there a request for a new mainframe? I am sure that life has gotten progressively more complicated, that the volume of data has increased substantially, that the information you are gathering has to be ever more significant. Now, you have lots more sources. There are electronics, there are visuals, and there are anecdotal materials which you have to crowd into this. This is such a critical tool. Why isn't there such a request? Why did they deny you the request for a computer?

It certainly cannot be considered a luxury item for the Chairman's office.

Mr. MILLER. No; it certainly is not that, sir. You are absolutely correct in that the amount of data that goes into our computer, of course, increases substantially every year, with the more than 3,000 accidents that are placed into the computer, as well as all of the data that goes with our Safety Recommendations Program, in terms of documenting the accomplishments and the implementation of the safety recommendations which the Board makes.

We were grateful to receive the $250,000 through the President's budget.

Senator LAUTENBERG. So are they for a couple of microprocessors or just software? I mean, you don't need the software conversion if you don't have something to convert it to.

Mr. MILLER. Basically, we will be trying to prepare for a conversion on the assumption that we will receive some additional funds in a future year.

Senator LAUTENBERG. What is the size of the mainframe?

Dr. LOEB. Mr. Chairman, we have a DEC, a Digital Equipment, a DEC-10 mainframe. It is old equipment.

Senator LAUTENBERG. How old? What is the vintage?

Dr. LOEB. Our equipment is almost 10 years old now, in terms of vintage. But the DEC-10 and DEC-20 go back even longer than that.

However, the problem that is facing us right now is we first have to determine what our needs are and what kind of equipment we want, and then plan for a conversion. You are right. We will undoubtedly need more money for a conversion than $250,000, and we will need more than $500,000, I believe, probably for a mainframe.

Senator LAUTENBERG. I would put a transponder in that conversion, if you know what they are, so that we can find you in case you get lost on the way from $250,000. [Laughter.]

BUDGET DISTRIBUTION

The technology in the last years has changed so much. Not only is it the volume of data that you are looking at, but it is the accessibility. I mean, you want to be able to get in there quickly. It could be, in fact, lifesaving almost on an immediate basis. Not having modern data processing technology is like sending the doctor into surgery without the proper tools and without the proper assistance.

That is a pet peeve of mine, as you probably can tell, and that is that the Government has some of the most obsolete, antiquated equipment to do very important jobs. We have seen some of it at the FAA. They had vintage 1965 IBM equipment there that my old company tried to give away but could not find anybody to take it because the maintenance costs were going to be more than the value of the equipment we were trying to give them.

On page 13 of your request, you distribute your 1991 budget by program mode, function, location. Are these distributions consistent with prior years' experience?

Mr. MILLER. Yes; they basically have remained relatively stable over the years.

Senator LAUTENBERG. Do you feel any of the modes in your program need additional resources? If so, which ones and for what purposes would those be?

Mr. MILLER. We requested increases in all of the modes in our original OMB request, and we are hopeful that in future years we will be able to get increases in each of the modes, but, again, in the same kind of relative distribution among the modes.

Mr. KOLSTAD. If you are talking about investigators, Mr. Chairman, we need 17 additional aviation investigators, 3 rail, 2 highway, and 4 positions for our aviation appeals program.

RECRUITMENT

Senator LAUTENBERG. How about the problem of recruiting skilled people? Is that a fairly easy task?

Mr. KOLSTAD. Well, it is not an easy task.

Senator LAUTENBERG. It takes time?

Mr. KOLSTAD. It takes time. We have been getting people with a great deal of experience. But, of course, once they get onboard, they need to be trained for the particular tasks that we do.

Senator LAUTENBERG. And, as a consequence, having the money there does not mean that you get the personnel immediately following on. You have to have the funds to employ them, and then you have a search program, and the testing, the training. There has to be some failure rate as well along the way.

Mr. KOLSTAD. Precisely.

TRAINING

Senator LAUTENBERG. And people are not running to work today for modest salaries in Government. There is a lot of satisfaction in being with the Government. But it is a question of what size sacrifice. So you need to do a lot more extra work on the recruiting and retention side.

How about the $81,000 that you requested for training? Lack of training is a criticism that the Board has levied against other agencies, including FAA's inspectors. Is the Board staff trained to a level that you would like to see them? What does $81,000 do? That is what you requested from OMB. Or, if that was not all you requested, how much did you request?

Mr. MILLER. We requested a total of $343,000 additional from OMB. Our current training budget is about $400,000. So, much of the $81,000 really represents the additional training funds that we need for these 22 additional positions that we are requesting and to ensure technical currency for our employees.

Senator LAUTENBERG. Training for the additional positions, or what? That's not recruiting and salaries, the $81,000?

Mr. MILLER. No, sir; that is training, which would be tuition, travel, and so on.

Senator LAUTENBERG. You requested $300,000?

Mr. MILLER. It was $343,000, sir.

Senator LAUTENBERG. Do us a favor and train them 16 percent of the way. I think that is what $81,000 is out of that. Well, no, it is more. My arithmetic is getting bad. It is 20-some percent.

OMB REQUEST

I wonder if you would do something for this committee, please, and that is submit your original request to OMB to us for review.

Mr. KOLSTAD. Certainly.

[CLERK'S NOTE.—The National Transportation Safety Board's fiscal year 1991 budget request is available for review from the subcommittee office files.]

MODAL INVESTIGATORS

Senator LAUTENBERG. What modes do you need more investigators for now?

Mr. KOLSTAD. Air, rail, and highway. [Laughter.]

Senator LAUTENBERG. Well, I should have asked what don't you need them for. Probably for elevator operators, I guess.

Mr. KOLSTAD. Well, I guess marine is one area where we don't. We may need more in the pipeline area as well.

Senator LAUTENBERG. What geographic regions need additional investigators, including pipeline?

Mr. MILLER. Of the 22 positions that we are requesting, about 17 of those would be in Washington; and 5 would be in our regional offices. That is because most of these positions, of course, are the technical specialists. They are one-of-a-kind specialists that we need for our major accident investigations in all modes.

RUNWAY INCURSIONS

Senator LAUTENBERG. What do runway incursions look like these days? Are they serious problems?

Mr. KOLSTAD. Senator, it is a serious problem. It is one that we have addressed in workshops. We testified on this issue on the House side.

There are a number of things that could be done, including improved signage, improved radar, the establishment of better communications between the controllers and the flightcrews, better lighting. We are extremely concerned about this issue. We still have on the record books the most catastrophic aviation accident in the Nation's history because of a runway incursion; the accident at Tenerife in the Canary Islands in 1977.

So we have believed for some time that this was an area that was not getting as much attention as it should have and we have, therefore, been pressing FAA to devote additional resources to this area.

Senator LAUTENBERG. Do they agree with you on the seriousness of the problem? Obviously you don't think they are adequately addressing it. John Lauber, one of your Board members, at a recent House hearing said that the Board hears about two to three runway incursions each week. That sounds like a lot to me.

Is that an accurate representation?

Mr. KOLSTAD. I think it is. Yes, sir.

Senator LAUTENBERG. So, then, why are there so many of these incursions? I guess it's for the reasons you just gave, obviously: lack of communications, part of it is crowding, and so on.

So let me get back to the question that I posed a minute ago, and that is this. Is FAA adequately addressing the problem, in your view?

Mr. KOLSTAD. I think that FAA is improving in their addressing of the problem. However, I don't think they are there yet. They have initiated an R&D program that we expect some good things to come out of.

I think it is going to be an area, Senator, that is going to take some constant attention on our part and on FAA's part.

Senator LAUTENBERG. Well, obviously something is wrong here. So if they need to improve their attention to it, that means that there wasn't adequate attention to it in the past.

Mr. KOLSTAD. There hasn't been.

AIR TRAFFIC CONTROL EQUIPMENT

Senator LAUTENBERG. What kinds of equipment, up front, if any, do you think would help relieve this problem fairly quickly, or at least reduce the problem? We are not going to relieve it totally? What about quick-scan radar?

Mr. KOLSTAD. There is a new surface radar system and it's called the ASDE-3. That is the technical name for it. It is going to be put into place in Pittsburgh on an evaluation basis, to see whether or not it should be expanded for the system. I think that this may be a very positive step.

Improved signage and improved lighting are two other areas I would suggest.

Senator LAUTENBERG. Are your people looking those over?

Mr. KOLSTAD. Absolutely.

Senator LAUTENBERG. Are you saying to FAA, "Hey, listen, get out there and pay attention to this stuff?"

Mr. KOLSTAD. Senator, this is an area that we look at in every accident that occurs at or around an airport. Runway incursions are one of the areas that the Board is monitoring, as we monitor all operational errors. Where we find that the margins of risk are excessive, we dispatch a SWAT team, as we have on three separate occasions in the past 2 years, to address that specific problem.

Senator **Lautenberg**. You're sure that you get reports of all of these incidents?

Mr. **Kolstad**. I am not uncomfortable that there is a lack of reporting of these incidents.

Senator **Lautenberg**. Is it possible that there is a lack?

Mr. **Kolstad**. Oh, sure.

Senator **Lautenberg**. These are the preventibles, I think, you know, runway incursions are potential accidents. Again, we have seen the seriousness of one of those happening.

SAFETY RECOMMENDATIONS

What outstanding Board recommendations do you believe are the most critical and need quick implementation in terms of the runway? Actually, we're talking about all areas now and not just the runway incursions.

Mr. **Kolstad**. All modes?

Senator **Lautenberg**. Yes; all modes.

Mr. **Kolstad**. I guess I would say the recommendation that I think would be the most important if it were adopted would be the passage of administrative license revocation by the remaining States that have not yet passed it. Twenty-eight States now have such a law. The remainder do not.

We think that that provision would probably be responsible for saving more lives than any other that we can think of, because it has been so extremely effective in reducing the drunk driving fatalities in those States where it has been passed.

So that is an area that we are going to continue to devote more time to—helping the States pass this legislation. All of the Board members have participated as witnesses before State legislatures in trying to get this kind of legislation passed.

Senator **Lautenberg**. You know that this has been an active area of interest for me, and whatever work you can do there, we are trying to get a national data base up to date, and make reference to it. It is quite incredible to me that other modes aren't accessing this information when they issue licenses of various types, whether it is train engineering or some of the pilot licensing. We think it is a very valuable tool

Do you have access to NDR?

Mr. **Kolstad**. Yes, sir; we do have access to the NDR.

HEAVY TRUCK STUDY

Senator **Lautenberg**. The Board recently issued a report that stated that one-third of 185 studied fatal crashes were caused by fatigue; one-third of the drivers had drugs or alcohol in their systems; and 10 percent of the fatalities were caused by medical problems having nothing to do with either alcohol or drugs.

Based on your findings, what recommendations are you making?

Mr. **Kolstad**. Senator, we made actually 42 recommendations as a result of this study. Some of the most significant recommendations concern better screening of these drivers by the employers when they seek employment; better examinations to determine whether or not this man or lady has a prior record of drug or alcohol abuse; whether, in fact, the experience that they are listing on their application is valid; and other measures, like sobriety checkpoints at truck weigh stations.

Senator LAUTENBERG. You support testing the drivers at those stations and during roadside stops?

Mr. KOLSTAD. Yes, sir; we do. As a matter of fact, we are recommending a demonstration program.

Senator LAUTENBERG. So it is not being done now regularly, to your knowledge?

Mr. KOLSTAD. Not regularly. No, sir.

Senator LAUTENBERG. What are the impediments to that type of random testing?

Mr. KOLSTAD. I, frankly, don't know of any. I think it is an effective way to address the problem.

SAFETY RECOMMENDATIONS

Senator LAUTENBERG. Are there any other recommendations that we have not touched on for improving the safety of truckdrivers?

Mr. KOLSTAD. Fatigue is a major concern. It affects all modes. Addressing it in the highway mode, we found as a result of this study, that fatigue was the No. 1 cause of these fatal accidents. One of the recommendations that we have made addresses the installation of tachographs, which is a recording device that records when, in fact, the truck is in operation and when it is not.

Senator LAUTENBERG. How do you fix a driver's linkage with that use? Is there a way of identifying the driver if the truck were in use for 12 hours straight?

Mr. KOLSTAD. It measures the wheel rotation, Senator. So if a truck is stopped at a truckstop with the engine running, you would know it.

Senator LAUTENBERG. OK.

So we know that. But do we know whether there is a single driver behind that wheel for 12 or 15 hours?

Mr. KOLSTAD. Yes, sir.

Senator LAUTENBERG. Is this device activated by an identifier card of some kind?

Mr. KOLSTAD. There are several different ways that it is done. But yes, the driver would be identified.

TRUCKDRIVER FATIGUE

Senator LAUTENBERG. I was shocked to see that one-third of these fatalities were caused by fatigue. I know, coming from the area that I do, in New Jersey, there are a lot of independents who drive, who used to carry coal a lot from Pennsylvania to the harbor ports in our area, for shipping outside the country, or for being used there. A lot of these independents look at their livelihood as based upon their ability to deliver cargo, and they push themselves, often with some fairly heavy rigs at very high speeds, to get their income up. It is understandable. But it is also very dangerous.

Mr. Kolstad. I might just add, Mr. Chairman, that the insidious thing about fatigue, of course, is that it encourages the use of drugs to stay awake.

Senator Lautenberg. Sure.

TRUCKDRIVER FATALITIES

Mr. Kolstad. So it is a doubly dangerous problem.

Senator Lautenberg. Just as a point of interest, have you studied whether or not these fatalities with trucks are fleets or independents, or small fleets or large fleets, or anything? Is there any information like that?

Mr. Kolstad. We did break that down, yes sir, as to what kinds of operators they were, whether they were owner-operators or whether they were common carriers.

Senator Lautenberg. If you could submit that for us, it would be very interesting.

Mr. Kolstad. Certainly.

Senator Lautenberg. I assume you look for connections between these things, and it would be gross negligence, I think, if we saw that it was largely large fleets who had the skills and the resources to manage these things.

Dr. Loeb. Mr. Chairman, we did not see any differences between the owner-operators and the fleet drivers in regard to that point.

Senator Lautenberg. Any identification of cargo types? You know, it is one thing if someone is hauling boxes, but it is another thing if you are hauling flammables.

Dr. Loeb. No, sir.

Senator Lautenberg. Whatever information you have on that would be of interest to us.

Mr. Kolstad. OK.

[The information follows:]

The Safety Board did not find any statistically significant difference in alcohol and other drug use by type of load carried. The table below shows the prevalence of drugs of abuse positive drivers by type of load.

HAZMAT/NONHAZMAT LOAD ANALYSIS

Type of load	Number of tox tests	Tests positive for DOA	Percent positive
Hazmat	14	4	28.6
Nonhazmat	128	41	32.0

The Safety Board also conducted an analysis of alcohol and other drug use among drivers by the load status of the tractor-trailer (full, partial, empty). The analysis identified no statistically significant differences at the 0.05 level in alcohol and other drug positive results among drivers of fully loaded, partially loaded, and empty tractor-trailers. Reasons for the differences in alcohol and other drug positives between drivers of fully loaded and partially loaded vehicles are not known. The table below shows driver drug of abuse test results by load status.

LOAD STATUS ANALYSIS

Load status	Number of tox tests	Tests positive for DOA	Percent positive
Full load	81	31	38.3
Partial load	33	7	21.2
Empty	41	12	29.3

TANDEM TRUCKS

Senator **LAUTENBERG**. I don't know whether you were here when I talked to Mr. Larson about any information gathered on tandem trucks, because there is now a consideration of extending the tandems to another unit. They were indefinite, and the response was, from the person who answered, that out West they find no problems with them. But, you know, we are not out West all the time. We are sometimes on crowded highways with lots of little cars running around there, and we have seen some awful accidents. I don't know whether they are tandems or just straight trucks.

Mr. **KOLSTAD**. I did hear the question to Mr. Larson, Senator. The fact is that we just don't have any data in which we have compared double bottoms or triple bottoms with tractor-trailer operations.

TRUCKDRIVER FATIGUE

Senator **LAUTENBERG**. I did want to ask you a couple of questions about crew fatigue in air carriers, which gets a lot of attention. But somebody rolling a rig with a load of thousands of gallons or pounds, who could spew hazardous materials all over, does not get the same rigid control or attention.

Let me ask this. Is there any limitation on the amount of hours an operator can be behind the wheel of a vehicle carrying hazardous or flammable material?

Mr. **KOLSTAD**. There is a limit, Mr. Chairman, on all operators. I assume you're talking about trucks?

Senator **LAUTENBERG**. Yes.

Mr. **KOLSTAD**. Yes; there is a limit.

Senator **LAUTENBERG**. Pat points out to me that the differences between types of cargo are nonexistent here. Maybe we ought to look, one of these days, at the type of cargo.

Mr. **KOLSTAD**. We have made recommendations, Mr. Chairman, that those drivers who are on a consistent basis, carrying hazardous materials, perhaps need to have some special training. In particular, those who are carrying liquid cargo, in which you have some different dynamics involved in both braking and cornering, need to be particularly sensitive to those characteristics.

Senator **LAUTENBERG**. Also there is highway congestion. If you ever had the chance to drive the New Jersey Turnpike, which is a main North-South thoroughfare——

Mr. **KOLSTAD**. Oh, many times.

Senator **LAUTENBERG**. When you are sitting in a car, you feel awfully small with these rigs rolling by you. They are sometimes driven like sports cars. We need special monitoring there, especially where you have a lot of automobile traffic and you don't have a lot of options. I mean, there are not soft shoulders or runaways, or those kind of things.

PIPELINE SAFETY

Before we close, I want to ask you about a subject that has become more a focus of late, and that is pipeline safety.

We have had a number of mishaps in the New Jersey/New York area, some of them with barges, tankers, and pipelines.

In your statement, you state that the Federal safety standards for gas pipelines are not adequate and need to be strengthened so that they can be better understood by government inspection personnel and by the regulated industry.

Do you want to just elaborate a little bit on that?

Mr. **Kolstad**. We feel strongly that there need to be additional State and Federal inspection programs. For a gas pipeline company to simply have a self-inspection program has, in many cases, proven inadequate, and there needs to be much more vigorous activity, particularly at the State level.

Senator **Lautenberg**. Did you have a comment, Dr. Loeb?

Dr. **Loeb**. Well, just to further answer your question, Mr. Chairman, we did make recommendations to RSPA to review and clarify the language of a number of their regulations.

We think the industry has good intentions, and does attempt to comply with the regulations. Many of the regulations, however, are vague and uncertain, and it is very difficult to know when you are in compliance. We have recommended that RSPA review the regulations to see which ones need to be clarified, and then to clarify those that do.

Senator **Lautenberg**. You are obviously not satisfied with what the private sector is doing in and by itself in the safety area.

Dr. **Loeb**. No; we are not.

Senator **Lautenberg**. How about helping me with this one. There is an exemption for low-pressure pipelines. They are primarily for liquid.

You are familiar with the subject, are you?

Dr. **Loeb**. Yes.

Senator **Lautenberg**. Would you give us your view on whether or not that exemption ought to continue?

Dr. **Loeb**. Right now, we have no evidence that that is a problem. We have looked at it from time to time, but right now we do not have evidence that there is a substantial problem.

PIPELINE SAFETY

Senator **Lautenberg**. There was an incident not too long ago with a low-pressure pipeline in the Arthur Kill, and that brought a significant wave of interest, from me, from Senator Bradley, as well as from people in the community.

One of the things that became fairly clear, was the age of many of these pipes, some of them put down as long as 50 years ago. Obviously there has been a lot of deterioration that has taken place, in addition to their exposure to accidents, even though they are supposedly in safe areas. A violation is always possible.

As a consequence of that, were you folks brought in to review that in any way?

Dr. **Loeb**. We did not investigate that particular pipeline incident in the Arthur Kill, although we have been in touch with OPS and are continuing to follow very carefully with them. If we believe that recommendations are needed, that they are not going to address the problem adequately, we will issue them.

We are very concerned about the age of pipelines. That is a clear problem. We have made recommendations regarding the age of certain pipelines.

Senator **Lautenberg**. You don't have, then, a primarily responsibility for doing that analysis. Yours is in response to an accident?

Dr. **Loeb**. That is correct.

Senator **Lautenberg**. We thank you very much.

We encourage you to dig in and fight hard for resources. The best thing to do in a job like yours, in my view, is to be able to look yourself in the mirror in the morning and say, have I done what the public trust has asked me to do, and not what OMB or any other agency here does. This is because you have an enormous responsibility. You can save the lives of lots of people; you can prevent injury and distress. From the information you gather, we ought to be able to be preemptive on some of this.

Mr. **Kolstad**. I could not agree more.

Senator **Lautenberg**. So we thank you very much and encourage you to keep up the vigor that you are bringing into this agency. It has always been a favorite department of mine. That does not mean that it cannot be improved or that we can't lend the kind of resource necessary to do the job to improve it.

Thank you.

Mr. **Kolstad**. Thank you very much, Mr. Chairman.

SUBMITTED QUESTIONS

Senator **Lautenberg**. Additional questions will be submitted for written response. We ask that you respond as quickly as possible.

[The following questions were not asked at the hearing, but were submitted to the agency for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

BUDGET REQUEST

SENATOR LAUTENBERG: What type of new mainframe are you interested in, and what is the approximate cost?

ANSWER: We are currently considering the capabilities of computers similar to the VAX 6210 that run the DEC VMS Operating System as well as a version of UNIX (DEC ULTRIX). The approximate cost would be about $550,000. However, the Board may be forced to consider a leasing arrangement.

SENATOR LAUTENBERG: Is a new mainframe necessary, or can microcomputer hardware be a substitute? Has this been explored -- since there is no funding requested for microcomputer hardware or software?

ANSWER: The Board is aware of some of the impressive capabilities of certain microcomputer configurations. However, the Board must take into consideration the limitations from the standpoints of processing power, storage capacity, and communications capabilities, and response time, features that are critical to supporting the Board's aviation and railroad accident data bases, as well as the Board's accounting and safety recommendations systems. The Board currently has an extensive microcomputer system, which has allowed us to delay the purchase of a new mainframe computer, until now, because a large portion of the ADP growth has been in microcomputer applications. We are currently monitoring the advances in microcomputer technologies and investigating if the Board's mainframe computer applications are feasible to operate on a cluster of microcomputers.

SENATOR LAUTENBERG: What training will not get done under the budget request, versus your original request?

ANSWER: Areas for which we have not had sufficient funds to provide training include: 1) currency training for our qualified pilot employees; 2) academic training in engineering sciences to bring our professional engineers up to date in engineering practices, and to provide sufficient familiarity with engineering principles to enable those investigators who are not engineers to perform effectively when specialized engineering support cannot be made available; and 3) formalized understudy programs for our journeyman investigators in corporate environments directly applicable to their modal specialty.

ACCIDENT INVESTIGATION

SENATOR LAUTENBERG: The Bureau of Accident Investigation includes five modal divisions: marine, aviation, highway, railroad, and hazardous materials and pipeline. How many personnel are assigned to each mode?

ANSWER: The Board's Bureaus were reorganized this Spring and the investigative divisions are in the Offices of Aviation Safety and Surface Transportation Safety. The personnel breakdown for the investigative divisions is below.

Office of Surface Transportation Safety

	HQ	Field	Vacancies
Marine Division	14	0	2
Highway	12	21	4
Railroad	11	15	8
Pipeline	4	0	1
Human Performance (multimodal)	7	0	8
Survival Factors (multimodal)	7	0	2

The Office of Aviation Safety has 137 positions, 65 of which are assigned to headquarters staff. The remaining 72 are divided among 6 regional offices and 4 field offices that report to the directors of the regional offices. Of the 137 positions, 100 are directly involved in aircraft accident investigation as investigators or technical specialists. The others are managers, administrative and clerical personnel or data technicians.

There are 13 additional specialists assigned to the Office of Research and Engineering who provide direct support to aviation accident investigation. These personnel read out the recorders, conduct aircraft performance analyses, and do metallurgy and materials examinations.

SENATOR LAUTENBERG: Which geographic regions need additional investigators?

ANSWER: Headquarters

Headquarters Senior Accident Investigator	1
NE Region Accident Investigator	1
Chicago Region Accident Investigator	1
Los Angeles Region Accident Investigator	1
Total	4

The needed positions are required to increase the number of field investigations and to assist in major and special investigations.

SENATOR LAUTENBERG: You have requested additional positions to enhance the Board's ability to respond to foreign accidents. What determines which overseas accidents you investigate?

ANSWER: Under the provisions of Annex 13 to the International Civil Aviation Organization (ICAO), the State of an airline operator and the State of the aircraft manufacturer is obligated to assist in certain aircraft accident investigations that occur in another country. The NTSB is the U.S. agency tasked with fulfilling the U.S. obligations to ICAO related to accident investigation. NTSB investigators provide the leadership of the U.S. teams that respond to overseas accidents involving U.S. airlines and selected U.S. manufactured aircraft operated by foreign airlines. The teams typically consist of NTSB, FAA, airline, and manufacturers' personnel from the U.S.

The continued growth of U.S. airlines' operations overseas and the growth in sales of U.S. manufactured aircraft overseas requires the NTSB to respond to more accidents. Moreover, the installation of U.S. manufactured engines and other components on foreign manufactured aircraft requires the involvement of U.S. interests in selected overseas accidents.

Other than the diplomatic reasons for U.S. involvement in overseas aircraft accidents, the NTSB leadership of the U.S. teams that participate in such accidents permits the assessment of safety issues that are relevant to the safety of U.S. airline operations. Many safety recommendations that have led to safety improvements have been developed as a result of the NTSB oversight of such teams on overseas investigations.

SENATOR LAUTENBERG: Are overseas investigations determined by the fact that U.S. citizens lost their lives, or U.S. crews were involved, or whether U.S. manufactured equipment was involved?

ANSWER: The provisions of Annex 13 to ICAO also permit the U.S. to participate in an overseas accident that involves U.S. citizens, regardless of the airline or the manufacturer of the aircraft.

OUTSTANDING BOARD RECOMMENDATIONS

SENATOR LAUTENBERG: What outstanding Board recommendations do you believe are the most critical and need quick implementation?

ANSWER: The Board is presently considering this matter, and we will furnish the Committee with a list of safety recommendations we believe are the most critical. Areas under consideration are: administrative revocation of driver's licenses; requirement for ground proximity warning systems; installation of pipeline excess flow valves; requirement for Mode C intruder conflict alert in terminal areas; improved passenger vessel safety; positive train separation; improved heavy commercial truck safety; brake wear limits and performance in transport category aircraft; protection for railroad tank cars carrying hazardous materials; and requirement for aircraft structural fatigue testing.

SENATOR LAUTENBERG: Why are these the most critical recommendations?

ANSWER: These areas of concern were chosen for a number of reasons. The highway safety recommendation relating to administrative revocation of driver's licenses of drivers who refuse a chemical test for alcohol or who provide a result at or above the State presumptive limit, would have a strong impact on removing drivers with high blood alcohol content from the roads and thus assist in reducing the large number of fatalities and injuries attributed to driving while under the influence of alcohol.

The requirement for the ground proximity warning system (GPWS) in commuter operation certificated aircraft and the requirement for Mode C intruder alert in terminal areas are needed to fill out existing requirements that the Safety Board considers to have gaps.

The safety recommendation regarding pipeline excess flow valves was listed because of the potential of a large population exposed to the residential use of natural gas.

The passenger vessel safety recommendations are critical because of the potential for a large loss of life on cruise ships.

The need for a system to provide positive separation of trains was demonstrated by the catastrophic nature of the railroad accident at Chase, Maryland on January 4, 1987. There is a potential for this type accident to occur at locations where Amtrak passenger trains operate.

The need for further requirements related to the operation of heavy trucks in commerce has recently been demonstrated by the Safety Board's Study, "Fatigue, Alcohol, Other Drugs, and Medical Factors in Fatal-to-the-Driver Heavy Truck Crashes." These safety recommendations are listed due to the potential for catastrophe that exists in this industry.

The need for further tests into the standards for maximum brake wear limits for transport category aircraft is a critical area because of the number of incidents investigated by the Safety Board and the potential for disaster demonstrated in those incidents.

The carriage of hazardous materials in railroad tank cars has a long history of problems. The Safety Board has long championed tank cars being fully protected with some type of tank head protection. While there has not been a recent railroad hazardous materials accident with major injuries or fatalities, the potential for a large scale disaster exists.

The Aloha Airlines accident near Maui, Hawaii on April 28, 1988 highlighted the aging aircraft problem in the U.S. The Safety Board believes there is a need for required structural fatigue testing of turbojet transport category airplanes.

SENATOR LAUTENBERG: When do you expect to see action on these critical recommendations?

ANSWER: The compliance of administrative revocation of driver's license in all of the States will be a long term project. There are now 30 States that now have an immediate form of administrative revocation of driver's licenses, the remaining 20 may take some time in enacting the necessary laws.

Both the GPWS and the Mode C intruder conflict alert safety recommendations are advancing and should be completed by the Federal Aviation Administration in the near future.

The pipeline residential excess flow valve safety recommendations we made recently. The Safety Board is currently working with RSPA to get positive action on these safety recommendations.

The passenger vessel safety recommendations were issued in late 1989. Since some of the recommendations require the Coast Guard to seek legislative authority, they could take a number of years to fully implement.

The railroad safety recommendation regarding positive train separation is in a research and development mode. The implementation of this recommendation depends on the development of a system acceptable by the industry. This could take a number of years.

The heavy truck driver safety issues are currently under study by the Federal Highway Administration (FHWA). The time frame for implementing these safety recommendations is based on the FHWA acceptance of the needs described in the Safety Board's report. The Board believes that most could be implemented in three to five years.

The FAA has agreed to the need for further tests on the transport category aircraft standards for brake wear limits and a change in the structural fatigue testing of transport category aircraft. Based on this acceptance by the FAA, the implementation of these safety recommendations should be completed within four years.

The Research and Special Programs Administration has a rulemaking action completed for publication in the near future that should meet the Safety Board's concern in the area of railroad hazardous materials tank car protection. The Safety Board believes that this issue should be resolved within two years.

SENATOR LAUTENBERG: List the Safety Board's outstanding recommendations by mode, the year made, and agency responsible for responding.

ANSWER: There are currently 1842 safety recommendations in an "Open" status. The number of "Open" safety recommendations by mode are listed below:

Aviation	394
Highway	400
Intermodal	92
Marine	526
Pipeline	137
Railroad	293
TOTAL	1842

The text of each of the open safety recommendations is listed in the attached computer printout.

[CLERK'S NOTE.--The NTSB outstanding safety recommendations as of May 5, 1990, will be available for review in the subcommittee office files.]

AIR CARRIERS

SENATOR LAUTENBERG: As you point out in your testimony, while the total accident rates for U.S. air carriers and commuters declined in 1989, the actual number of fatal accidents for air carriers was the highest since 1968. In summary, what are the major problems in the air transportation field?

ANSWER: The major problems in aviation safety include human performance issues involving flightcrews, maintenance and inspection, and air traffic control. Pilot training, qualifications, and adherence to procedures are problems that lead to many accidents. The quality of maintenance and inspections affects the airworthiness of aircraft airframes and engines, the failure of which leads to accidents. Air traffic control problems lead to collisions and near collisions in the air and on runways. Severe weather is involved in many accidents. Lastly, sabotage of airliners has become a most significant issue that has involved the NTSB resources in recent years. Although the FBI has primary responsibility for criminal acts against airlines, many of the cases are not clear-cut as to whether sabotage was involved or airworthiness matters were involved.

SENATOR LAUTENBERG: One of the concerns expressed by NTSB has been FAA establishing minimum experience levels for each pilot-in-command and second-in-command pilots, and the pairing of pilots based on experience. What is the status of that recommendations? (A-88-137)

ANSWER: In a response from the FAA dated May 30, 1989, they stated they had reviewed this recommendation made to them on November 3, 1988 and determined that in some cases it may not be practical or possible to schedule an experienced flight crewmember with an inexperienced flight crewmember; i.e. in the case of a newly certificated 121 operation. On January 21, 1988, the FAA issued ACOB 8-88-1 "Flight Crewmember Experience and Scheduling." This ACOB requests POI's to bring the issue of scheduling inexperienced flight crewmembers with experienced flight crewmembers to the attention of certificate holders and request that the certificate holders develop policies and procedures for establishing, to the extent possible, minimum experience levels when pairing pilots for scheduling purposes. On July 19, 1988, the FAA issued Action Notice 8430.22 to request that the POI's review certificate holders policies and procedures to determine if any change had taken place. An FAA review of the reports showed that 41% of the 121 carriers and 26% of the 135 carriers had policies regarding minimum experience levels when pairing pilots. Also, 52% of the 121 carriers and 12% of the 135 carriers had procedures requiring the pilot-in-command to make all takeoff and landings when either the pilot-in-command- or the second-in-command is inexperienced. The FAA believes that rulemaking is not necessary at this time.

The Safety Board response to the FAA on September 27, 1989, expressed concern that the FAA did not believe rulemaking necessary because of voluntary actions by the carriers. Although many carriers have implemented policies regarding experience levels for pairing of pilots, the Board believes that such policies and procedures should be standardized and promoted by the FAA.

In the latest FAA response dated December 8, 1989, the FAA indicated they had asked a joint government/industry task force to establish a committee to provide recommendations to the FAA regarding pilot experience, crew pairing, and associated training requirements.

Based on this commitment by the FAA to approach this problem through a joint government/industry task force, the Safety Board, on January 31, 1990. Classified Safety Recommendation A-88-137 as "Open--Acceptable Action."

SENATOR LAUTENBERG: Do you believe that minimum standards, or the lack thereof, have contributed to these accidents? If so, how?

ANSWER: The Safety Board determined that the "... absence of regulatory or management controls governing operations of newly qualified flight crewmembers ..." contributed to the cause of the Continental Airlines, Inc. DC-9 accident at Denver, Colorado, November 15, 1987. The Safety Board also determined that the "... slow implementation of necessary modifications to its operating procedures, manuals, checklists, training, and crew checking programs ..." contributed to the cause of the Delta Air Lines, Inc. B-727 accident at Dallas-Fort Worth International Airport, Texas, August 31, 1988. It is impossible to state with absolute certainty that errors of omission/commission dramatized in these tragic accidents would not have happened if the experience level or training provided had been different. It is probable that increased experience/training would definitely reduce the likelihood of such occurrences.

SENATOR LAUTENBERG: Last year, the Board provided the Committee examples of five aviation accidents which pilot experience was found to relate to the accident cause, and today you present five more. What are the individual carriers doing to remedy the problem of pilot inexperience?

ANSWER: The question of minimum experience standards in the airline industry is extremely complex, not only because of the subjective nature of actual knowledge and skill accrued through training and experience, but also in a very practical way because of constraints imposed by labor agreements of the individual airlines. The Safety Board is gratified that our recommendation to the FAA_ as discussed earlier has initiated a joint government/industry task force to address this issue.

SENATOR LAUTENBERG: In your statement, you question the Federal Aviation Administration's surveillance and oversight. In what areas do you see their surveillance and oversight lacking?

ANSWER: The NTSB has found deficiencies in the routine surveillance of airlines' maintenance and operations departments during the investigations of several accidents. Generally, the deficiencies stem from the lack of sufficient staffing and the training of inspectors. The FAA has made efforts recently to increase staff and to provide surveillance training. The NSTB has also found a lack of followup and closure of deficiencies found by special National inspection teams that perform in-depth inspections of airlines. For instance, in certain cases, deficiencies uncovered and cited by special FAA inspection teams had not been corrected and were found to be present during an NTSB investigation of an accident. The responsibility of overseeing the corrective actions was given to the Principal Inspectors, rather than being overseen by the National team members, who had uncovered the deficiencies.

SENATOR LAUTENBERG: Are you saying that the FAA is too cozy with the industry it is supposed to monitor?

ANSWER: The NTSB has not found the FAA to be "to cozy with the industry." Rather, it has found that insufficient staff and training of inspectors has precluded adequate oversight. The FAA Principal Inspectors necessarily have to work closely with an airline to understand its operations and to verify the airline's compliance with regulatory standards. This relationship may produce an atmosphere where the inspectors fail to note discrepancies; however, the National inspection teams are led by and staffed with inspectors from other Regions and Offices who can provide a fresh, more objective view of a particular airline's operations.

SENATOR LAUTENBERG: In what ways can the FAA do more, and why aren't they pursuing these activities on their own?

ANSWER: The NTSB has urged the FAA to increase surveillance and to improve followup on negative findings following inspections to ensure an adequate level of safety. The hiring and training of more inspectors that is underway should improve this situation. More National in-depth inspections with followup to correct deficiencies found should be accomplished.

Lastly, the complexity of the airline industry requires the cooperation and close working relationship of the FAA, the airlines, and the manufacturers to ensure safety. Recent joint government/industry task forces assembled to develop improvements in matters related to aircraft maintenance and inspection, human factors, etc. are a positive step forward for the industry. For example, there are current joint task forces dealing with such topics as continuing airworthiness (aging aircraft), human factors of maintenance and inspection, titanium rotating (engine) parts, aircraft wheel brakes, pilot pairing, cargo doors, etc. The FAA should support and encourage such efforts.

RUNWAY INCURSIONS

SENATOR LAUTENBERG: John Lauber, at a recent House hearing, said that the Board hears of about 2 to 3 runway incursions every week. Has the Board been able to investigate these reports?

ANSWER: The Safety Board is unable to investigate all of the runway incursions that occur because of staffing limitations. The Safety Board does investigate all runway incursion accidents and selected incidents. The most recent runway incursion under investigation by the Safety Board involved an Eastern Airlines Boeing 727 which collided with a Beech 100 after landing at the Atlanta Hartsfield International Airport on January 18, 1990.

SENATOR LAUTENBERG: Why are there so many of these incursions? Is it due to poor communications, too much traffic for controllers, or pilots' inattention?

ANSWER: The number of runway incursions increased 21 percent from 1988 (178 occurrences) to 1989 (216 occurrences). This increase is attributable, in part, to the continual growth in the number of operations at most airports and the FAA's efforts to increase present airport capacity and acceptance rates.

SENATOR LAUTENBERG: What can be done (research, demonstrations)?

ANSWER: The Safety Board believes that, in the near term, the most effective corrective actions involve enhanced pilot and controller training and increased awareness of the problem to improve communications, coordination (intra tower and cockpit), and airport markings and signing. However, in the longer term, the Safety Board believes that the most effective runway incursion prevention action involves the implementation of an automated airport traffic management system that will detect a pending collision situation and alert both controllers and pilots to the need for corrective actions.

ALCOHOL AND DRUG TESTING

SENATOR LAUTENBERG: Following the September 20 crash of USAir Fight 5050 at LaGuardia, there was considerable delay (44 hours) before the flight crew took alcohol and drug tests. Why?

ANSWER: The NTSB investigators made direct requests for toxicological tests of the USAir flight 5050 flightcrew with the airline and union representatives shortly after the accident. However, at the advice of the pilots' union representatives the pilots did not submit samples for an extended period of time, and when they did, they only provided urine. We have been working closely with the Air Line Pilots Association to resolve this matter for future accidents.

SENATOR LAUTENBERG: Why is there an inconsistency between when airflight crews have to be tested versus railroad crews?

ANSWER: Alcohol and drug abuse among railroad crews led to rulemaking by the Federal Railroad Administration concerning toxicological testing of crews several years ago. Similar rulemaking was undertaken more recently by the Federal Aviation

Administration (FAA) to cover flight crews and others in safety-related positions, partially in response to the Executive Order intended to foster a "drug free workplace." However, these regulations do not allow for testing of blood samples and allow a 32 hour period for the flight crew to be tested. Also, they are not tests for alcohol. The Safety Board made a recommendation to the Department of Transportation in December 1989 for consistency across all modal regulations. At this time we have not received a response from the DOT. Additionally the Coast Guard drug program differs from each of the other.

SENATOR LAUTENBERG: Who has the authority to enforce consistency across all modes?

ANSWER: All transportation modal administrations are a part of the Department of Transportation and, accordingly, report to the Secretary of Transportation. All proposed rulemaking action by the modal administrations are subject to review and approval by the Office of the Secretary. Thus, the Secretary of Transportation has the necessary authority to achieve/enforce consistency of toxicological testing regulations across all modes.

SENATOR LAUTENBERG: Is there any progress in that direction?

ANSWER: Investigations of transportation accidents conducted by the Safety Board has demonstrated clearly the inconsistent approach taken by the Department of Transportation in the formulation of regulations that pertain to the drug and alcohol testing of persons involved in incidents and accidents in the various transportation modes. Based on the experience, the Safety Board, on December 5, 1989, issued safety recommendations to the Secretary of Transportation urging the adoption of uniform regulations for all drug and alcohol testing in all transportation modes, including both private sector employees and U.S. Department of Transportation employees. Although the Safety Board has not received a formal reply to these recommendations, we have learned, informally, that the Secretary is considering these issues.

AVIANCA FLIGHT 052

SENATOR LAUTENBERG: Following the tragic crash of Avianca flight 052, which killed 73 of the 158 people aboard, the Board detailed numerous instances of poor communication between the Columbian crew and controllers at three different flight centers. There have been other cases of poor communications. What has been done in this area since that January 25 accident?

ANSWER: Following the crash of Avianca flight 052 on January 25, 1990, the Safety Board issued 3 urgent safety recommendations to the Federal Aviation Administration (FAA) which emphasized the importance of accurate pilot/controller communications. The FAA has been very responsive to these recommendations. In addition, the Safety Board is aware of other FAA efforts that may be helpful in improving communications within the air traffic control (ATC) system.

SENATOR LAUTENBERG: What specific recommendations did the Board make following this accident?

ANSWER: The following urgent safety recommendations were issued to the Federal Aviation Administration on February 21, 1990:

> Immediately notify all domestic and foreign air carriers to emphasize that all pilots operating commercial air transport flights in the United States (U.S.) National Airspace System (NAS) must be thoroughly knowledgeable of the flight operating and air traffic control (ATC) rules and procedures, including standard phraseology, for operating in the U.S. NAS. This information is included in several publications: Part I of Annex 6 to the Convention on International Civil Aviation, the U.S. Federal Aviation Regulations, the Air Carrier's Operational Specifications issued by the Administrator of the FAA, the U.S. Aeronautical Information Publication, the U.S. Airman's Information Manual, Notices to Airmen, Advisory Circulars, and the U.S. Air Traffic Control Handbook (7110.65F). Pilots must be particularly familiar with their duties and responsibilities affecting flight operations and safety which include fuel supply, emergency conditions, requests for assistance, declaring a state of minimum fuel, and declaring an emergency for additional ATC assistance to ensure a safe landing. (Class I, Urgent Action)(A-90-9)
>
> Immediately disseminate the contents of this safety recommendation letter (A-90-9 through -11) to all air carrier operators involved in commercial air transport operations in the United States National Airspace System. (Class I, Urgent Action)(A-90-10)
>
> Immediately issue a General Notice (GENOT) directing management of all air traffic control (ATC) facilities to formally brief all air traffic controllers on the circumstances of the January 25, 1990, accident of Avianca Airlines fight 052 and to emphasize the need to request from flightcrews clarification of unclear or ambiguous transmissions that convey a possible emergency situation or the need for additional ATC assistance. (Class I, Urgent Action)(A-90-11)

SENATOR LAUTENBERG: Do you feel that foreign and domestic carriers are thoroughly knowledgeable with air traffic rules and phraseology?

ANSWER: The issue of pilot/controller communications and foreign air carrier requirements for flight into the United States National Airspace System are to be addressed at the Safety Board's public hearing of Avianca flight 052 at Melville, New York, on June 20-22, 1990.

SENATOR LAUTENBERG: How big a problem is "poor communications" between centers and pilots?

ANSWER: Recently, Battelle's Aviation Safety Reporting System Program Office completed a research study concerning communications problems. The study reviewed reports submitted by controllers and pilots relative to communications problems. The study's principal conclusion was that, "... a substantial number of controllers are handling too much traffic, or traffic mixes that are too complex ...." The Safety Board concurs with the findings of this study.

SENATOR LAUTENBERG: FAA has stated through its aviation safety office that it has been concerned about communications for some time. In your opinion, are FAA's programs up to the task?

ANSWER: The Safety Board will receive testimony on this issue at its Public Hearing on the Avianca 052 accident to be held June 20-22, 1990. The report of this accident investigation will evaluate and provide conclusions on the FAA's programs for effective communications between pilots and controllers. The Safety Board will continue to monitor and evaluate the effectiveness of the FAA's on-going programs for the improvement of pilot/controller communications.

TRUCK ACCIDENTS/CAUSES

SENATOR LAUTENBERG: How do you fix the hours-of-service violations -- would tachographs help?

ANSWER: The Safety Board historically has supported the use of tachographs, other on-board recording devices and technological innovations which would enhance a motor carrier's ability to make prudent decisions concerning dispatching and continued use of drivers within present hours of service limitations.

The Safety Board believes that the use of such devices would also enhance the ability of Federal, State, or local officials to immediately check the status of a driver's hours of service during road-side inspections, or following a highway accident involving the driver. Since road-side inspections account for only a small percentage of all commercial vehicles in operation, road-side inspections can only play a small part in reducing hours of service violations. Therefore, the operating motor carrier must play a primary role in preventing hours of service violations.

Installation of an on-board recording device will not prevent hours of service violations, and logically will not prevent fatigue-related accidents from occurring, if a motor carrier does not have, and is not required to have, information concerning a driver's available hours of service for the current and the next tour of duty. This is particularly so in cases where drivers work irregular schedules or have other outside employment.

The Safety Board finds it incongruous that since 1983 Federal regulations require hand-written duty status record and/or the on-board recording device to maintain current hours of service data, yet at the same time permit up to 13 days to pass before the operating motor carrier is required to obtain that information from the driver. The Safety Board believes that the provisions of regulations (49 C.F.R. 395.8(i) and 395.15(h)(1)) create a regulatory environment which encourages carriers "not to know" their drivers' current hours of service.

The Safety Board called this problem to the attention of the Federal Highway Administration (FHWA), the Federal agency responsible for enforcing the hours of service violations, in 1985. As a result of its investigation of a fatal bus accident which occurred near Cheyenne, Wyoming, the Safety Board recommended that the FHWA revise Section 395.8(i) of Title 49, Code of Federal Regulations, to require that drivers forward each duty status record to the employing motor carrier upon completion.

In response to this safety recommendation, the FHWA advised the Safety Board that in its view any change of existing rules was unnecessary. Because of FHWA's inaction, this safety recommendation (H-85-20) was placed in a "Closed--Unacceptable Action" status on January 25, 1989.

Any provision of law or regulation requiring installation of automatic on-board hours of service recording devices will not be effective in reducing hours of service violations if motor carriers are not required to use that information in determining a driver's next work assignment.

SENATOR LAUTENBERG: Are tachographs now required by state law?

ANSWER: Not to the Safety Board's knowledge.

FATIGUE

SENATOR LAUTENBERG: In your fatal truck accident report and in your prepared statement regarding the rail mode, you mentioned crew fatigue as a significant concern. What is being done in the human factors area that addresses fatigue?

ANSWER: The NTSB evaluates the contribution of human performance in every accident that it investigates. Further, in special studies conducted by the Safety Board, such as the Fatal-To The Driver Heavy Truck Study, fatigue is considered as it relates to accident causation.

Specifically considering the rail area, the Safety Board has found that train crewmember fatigue induced by chronic sleep deprivation and/or irregular/unpredictable work/rest cycles were causative factors in several major rail accidents in recent years. The following are examples:

-- Head-on Collision of Burlington Northern Railroad freight trains at Wiggins, Colorado, April 13, 1984

-- Rear-end collision of Burlington Northern Railroad freight trains near New Castle, Wyoming, April 22, 1984

-- Head-on collision of Consolidated Rail Corporation freight trains near Thompsontown, Pennsylvania, January 14, 1988

-- Head-on collision of Iowa Interstate Railroad freight trains near Altoona, Iowa, July 30, 1988

The common thread in all these accidents was a failure of a train crew to stay awake and comply with train orders or cab signal and wayside signal aspects.

The Safety Board's reports of these accident investigations analyzed at length the impact of sleep deprivation and irregular/unpredictable work/rest cycles on the crews involved in the accidents.

SENATOR LAUTENBERG: What recommendations have you made to the highway, rail, and air areas regarding crew fatigue?

ANSWER: The Safety Board has issued 39 safety recommendations addressing most aspects of the fatigue and fitness-for-duty issues. However, since they were issued in a piecemeal fashion, we have issued three new safety recommendations (I-89-1, -2, and -3: issued May 12, 1989) to the Secretary, U.S. Department of Transportation. These three safety recommendations call upon the Secretary to provide a coordinated research and rulemaking program to address the fatigue/fitness-for-duty/work cycle issues in transportation safety. Below is the language of the May 12, 1989 safety recommendations to Secretary Skinner:

> Expedite a coordinated research program on the effects of fatigue, sleepiness, sleep disorders, and circadian factors on transportation system safety.
>
> Develop and disseminate educational material for transportation industry personnel and management regarding shift work; work and rest schedules; and proper regimens of health, diet, and rest.
>
> Review and upgrade regulations governing hours of service for all transportation modes to assure that they are consistent and that they incorporate the results of the latest research on fatigue and sleep issues.

SENATOR LAUTENBERG: Are the agencies responsible for these modes, in your estimation, doing enough in the fatigue area relative to research, enforcement, and work rules?

ANSWER: In testimony before your Subcommittee, the Safety Board complemented the FAA for the recent expansion of its human performance efforts. The Safety Board believes that additional work needs to be done by the other modal administrations and has issued recommendations related to the fatigue issue to the FHWA, USCG, FRA, and the DOT.

In the Fatal-To-The-Driver Heavy Truck Study, the Safety Board issued a recommendation to the FHWA that it

> "conduct a detailed review of, and report on, trucking industry structure, operations, and conditions, especially shipping and dispatching, and receiving requirements, shipment broker operations, just-in-time shipments, and truckload/less-than-truckload operations which may create incentives for truck drivers to violate hours of service regulations and to use drugs."

The Safety Board is concerned that fatigue is a direct result of these existing industry procedures.

Insofar as the Federal Railroad Administration is concerned, the Safety Board is not aware of any research being done in the areas of irregular/unpredictable work/rest cycles or the effect of chronic sleep deprivation on train crewmembers' performance. FRA does make inspections to detect violations of required maximum on-duty time and minimum off-duty time as provided for by the Hours of Service regulations. However, representatives of FRA who were witnesses at the Safety Board's public hearing into the Thompsontown accident testified that they saw no compelling need to change or modify the regulations to provide for improved work/rest cycles.

The Safety Board addressed the safety concerns of prolonged and unusual work shift schedules and crewmember fatigue in a report on the collision between the U.S. passenger/car ferries CAPE HENLOPEN and NORTH STAR on Long Island Sound, Orient Point, New York. The Safety Board concluded that current Coast Guard regulations do not establish limitations to effectively reduce the likelihood of cumulative fatigue and its associated risk to the performance degradation among crewmembers of ferry vessel operations. Accordingly, the Safety Board recommended on July 27, 1988, that the U.S. Coast Guard "establish watch and duty time limitations for crewmembers on board ferries and other inspected passenger vessels."

Finally, the Safety Board addressed the need for an aggressive, overall Federal program directed at the problems of fatigue and sleep issues in transportation safety. The Board recommended the DOT:

> "Expedite a coordinated research program on the effects of fatigue, sleepiness, sleep disorders, and circadian factors on transportation safety."
>
> Develop and disseminate educational material for transportation industry personnel and management regarding shift work; and rest schedules; and proper regimens of health, diet, and rest.
>
> Review and upgrade regulations governing hours of service for all transportation modes to assure that they are consistent and that they incorporate the results of the latest research on fatigue and sleep issues."

PIPELINE SAFETY

SENATOR LAUTENBERG: In your opening statement, you note that federal safety standards for gas pipelines are not adequate and need to be strengthened and clarified, so that they can be better understood by governmental inspection personnel and by the regulated industry. Please elaborate on that statement.

ANSWER: The OPS has stated that its regulations are intended to be performance regulations so as to provide pipeline operators latitude in the actions they take to comply with the regulations. The Safety Board believes that performance regulations can serve the public interest provided they state the safety objective to be achieved and contain adequate standards against which an operator's performance is to be measured. A properly crafted performance regulation should make known to both the regulated and the regulator the results expected and the criteria to be used in evaluating the adequacy of the actions taken. However, our review of the pipeline safety regulations identified many that are no more than general statements; thus, making it difficult, if not impossible, for gas operators to understand what action(s) need to be taken and how to measure the degree of compliance achieved by the action(s) taken. The same difficulties confront state and Federal inspectors in determining compliance by pipeline operators during their inspections of pipeline operators to determine compliance with the Federal pipeline safety requirements.

The Safety Board's experience indicates that most pipeline operators dedicate considerable resources into complying with Federal pipeline safety requirements and that most operators desire to comply. A lack of compliance by a pipeline operator most often is a result of not knowing either what is expected or what result must be obtained to achieve compliance. An example used in the Board's report dated March 27, 1990, on the KPL Gas Service Company accidents to demonstrate this point was the gas company's use of leak surveys in lieu of electrical surveys to identify areas of continuing corrosion. Section 192.465(e) permits a gas pipeline operator to substitute leak surveys in lieu of the preferred electrical survey but in so doing, does not establish any safety objective to be met, does not establish the type of leak survey to be used, and does not establish the frequency such surveys must be performed. The gas company opted to use the least costly and least effective of available leak surveys, performed them at 5-year intervals instead of using the 3-year interval required for electrical surveys, did not determine the causes of leaks found and repaired, and performed no overall analyses capable of identifying increasing leakage trends within areas of its system that may indicate continuing corrosion problems. Technically, the company's actions complied with the regulation; but they did not include the use of data analyses expected by OPS or comply with the OPS objective to achieve a declining corrosion-caused leak trend as included in OPS' enforcement manual available only to its and state inspection personnel.

The Board recognizes that the OPS provides interpretations of the regulations when asked and annually participates in numerous meetings with state and pipeline industry personnel to discuss compliance with its regulations. The Safety Board does not doubt that these actions assist those attending the meeting to better understand what is expected of operators for those regulations that are discussed; however, amending the regulations to state the objective to be achieved and the criteria against which achievement will be measured would more effectively inform the industry of the safety requirements, would result in greater industry-wide compliance through voluntary actions, would reduce the number of requests for interpretations and the need for meetings to inform the industry and others the actions required for compliance, and would allow the OPS to more effectively use its limited pipeline safety resources.

SENATOR LAUTENBERG: Where are the regulations inadequate?

ANSWER: Inadequate regulations are found throughout each subpart of 49 CFR 192 and 195. The regulations that address materials, design, testing, and welding are more specification oriented requirements and thus have fewer of the inadequacies discussed above. However, some of those regulations do not include criteria against which accomplishment is to be measured.

Regulations most subject to the inadequacies discussed above are those that address operation, inspection, and maintenance requirements for pipelines. For example, section 195.402(c)(9) requires for pipelines not equipped to fail safe that the operator's procedural manual include procedures for detecting abnormal operating conditions by monitoring the pressure, temperature, flow, or other appropriate data and transmitting it to an attended location. The regulations do not define the term "fail safe" thus leaving this provision subject to each operators interpretation. Subparagraph (c) states that the purpose of the requirements that follow is to provide safety during maintenance and normal operations; yet, the majority of the requirements pertain to investigating accidents, identifying abnormal operations, preparing for and responding to emergencies, and minimizing the likelihood of hazardous conditions. Even so, the requirements are little more than general statements of some action that the operator must "provide for" and do not establish objectives to be achieved or criteria to measure the adequacy of the actions the pipeline operator elects to take. Referring again to 195.402 (c)(9), this regulation does not include criteria on the sensitivity, reliability, or other performance characteristics that must be met by the system the pipeline operator elects to install to detect abnormal operating conditions. Consequently pipelines hundreds or thousands of miles in length are permitted by the regulations to transport products hazardous to the public and to the environment with severely limited capabilities for promptly detecting major releases of product from the pipeline.

The Safety Board believes that a critical review of each pipeline regulation is needed to identify and modify those that do not contain an easily understood safety objective and criteria capable of measuring for acceptance the actions an operator takes to comply.

SENATOR LAUTENBERG: As part of our regular hearing process this year, the Committee noted a number of vulnerabilities in RSPA's Office of Pipeline Safety. We would be interested in your views on the adequacy of policies and resources in OPS.

ANSWER: The Board believes a potential exists for public safety to be compromised if OPS depends solely on data collected and reported by pipeline operators. We believe OPS should periodically verify both its content and accuracy.

Although the OPS has attempted to improve the accuracy of transfer of data from the forms to its computer data base, we are not aware of any actions being taken to verify the accuracy of the information on the forms.

In its report on the Mounds View, Minnesota accident that occurred July 9, 1986, the Board assessed the adequacy of OPS' inspection force and found that it lacked sufficient staff. In OPS' Central Region, it was found that only two inspectors were available to inspect 13 interstate pipeline operators and to monitor the intrastate pipeline inspection and enforcement program for 10 states. The Board recommended at that time that the Department of Transportation increase the OPS pipeline inspection capability to enable it to perform periodic safety reviews of all pipeline operations directly subject to OPS monitoring and to perform timely, effective, followup compliance reviews of those operations in which compliance deficiencies are identifies.

While our investigation of the October 3, 1989 pipeline accident near Sabine Pass is yet to be completed, testimony provided at the public hearing suggested that OPS' Southwest Region is also understaffed.

SENATOR LAUTENBERG: Please provide for the record the status of all NTSB recommendations in the pipeline area for the last several years.

ANSWER: The computer list attached gives all pipeline mode safety recommendations issued since January 1, 1986.

SENATOR LAUTENBERG: Have you generally found OPS to be responsive in a timely manner to NTSB recommendations?

ANSWER: The Safety Board addresses its pipeline safety recommendations to the Research and Special Programs Administration (RSPA) of which the Office of Pipeline Safety is a part. To date, the Safety Board has addressed 205 safety recommendations to that agency. These are in the following status assignments:

Pipeline Safety Recommendations Addressed to RSPA

Closed--Acceptable Action	88
Closed--Acceptable Alternate Action	13
Closed--Unacceptable Action	43
Closed--No Longer Applicable	9
Closed--Reconsidered	8
Closed--Superseded	10
TOTAL Closed	171
Open--Acceptable Action	21
Open--Acceptable Alternate Action	0
Open--Unacceptable Action	3
Open--Await Response	10
TOTAL Open	34
TOTAL to RSPA	205

The acceptance rate for the pipeline safety recommendations addressed to RSPA is 72.6%. The acceptance rate for all safety recommendations is 81.1%. The acceptance rate for all pipeline mode safety recommendations is 86.4%. And, as a final comparison, the acceptance rate for all safety recommendations addressed to RSPA (hazardous materials and pipeline included) is 73.8%.

From these numbers, it is apparent that the pipeline side of the RSPA does not always agree with the Safety Board's safety recommendation. It should be noted, however, that RSPA does generally respond using the 90 day requirement in the Safety Board's enabling legislation.

SENATOR LAUTENBERG: How have your recommendations differed from those of the Reagan Administration's Safety Task Force? Do your recommendations address any significant areas that the Safety Task Force did not look into? If so, please note these areas?

ANSWER: The U.S. Department of Transportation's (DOT) "Safety Review Task Force Report on RSPA's Pipeline Safety Program" included all significant areas addressed by Safety Board Recommendations. The Safety Board was generally pleased with the recommendations made by the DOT's Task Force and found them similar to previous Safety Board positions on needed improvements. However, this report did not adequately address the inadequacy of many present pipeline safety requirements to inform pipeline operators of the safety objective to be achieved and to provide criteria against which accomplishment of the objective will be measured.

The Safety Board believes that several benefits would result should the OPS revise its safety regulations to include objectives and measurement criteria. First, those pipeline operators that now dedicate considerable of their resources to comply with the pipeline regulations would better understand what is expected of them and also would have a means to determine when they had achieved compliance. Next, such regulations would make easier the tasks of both the state and Federal inspectors to identify and document areas of non-compliance and thereby greatly improve compliance enforcement actions. Additionally, the safety requirements would be more uniformly applied nationwide. Explicit regulations that also contain compliance measurement criteria also would greatly reduce the present actions OPS takes to interpret its regulations and allow the OPS to make more efficient use of its limited staff resources.

An area of the Task Force's report with which the Safety Board does not agree is its finding that the present level of staffing is adequate. The Safety Board agrees that past OPS policies and ineffective management often resulted in OPS not taking effective pipeline safety actions. As pointed out in the Task Force's report, the OPS has made major modifications in its policies, has began to make improved use of available management tools such as the pipeline data bases, and has become much more aggressive in the use of its enforcement powers to improve pipeline operator compliance.

Also, the Task Force report describes fairly completely the many hundreds of pipeline operators, interstate liquid and gas transmission pipelines and intrastate pipelines not subject to a State's safety regulation, that are subject only to the OPS' safety inspection and enforcement activities, describes many regulatory, administrative, and oversight improvements the OPS needs to undertake, and identifies the OPS staff budgeted to perform both the current and the recommended programs. The Safety Board, based on its previous reviews of OPS workload and staffing, has recommended that the Secretary of Transportation provide increased staffing for the pipeline safety program, and the Board's ongoing investigation of a fishing vessel/offshore pipeline accident near Sabine Pass, shows no improvement in the OPS' capability to implement an effective pipeline safety program. The Safety Board is unable to find support in the Task Group's report or elsewhere for the Task Group's finding that "additional Federal inspectors are not needed at this time." Also, the Safety Board wishes to point out that additional technical support personnel, in addition to more inspectors, are necessary to accomplish the program enhancements, studies, and research activities advocated in the Task Force report.

SENATOR LAUTENBERG: Currently, OPS exempts all liquid pipelines operating at less than 20 percent of their minimum strength from RSPA regulations. This exemption applies to all such pipelines without regard for their age, their proximity to ecologically without regard for their age, their proximity to ecologically sensitive areas, or their risk of external damage. The DOT Safety Task Force recommended that this exemption be repealed and although RSPA agreed with the recommendation, the exemption has not yet been repealed. Has NTSB addressed this issue of low-stress pipelines?

ANSWER: Previous Safety Board investigations have not included an accident involving pipelines operating at or less than 20 percent of its specified minimum yield strength. However, the Safety Board does not believe that stress level alone is sufficient reason to exempt from regulation a pipeline used to transport hazardous liquids. Releases from pipelines more generally are the result of corrosion, excavation-caused damages, and improper operations none of which directly relate to the operating stress of the pipeline. Consequently, the Safety Board does not favor the present exclusion of 49 CFR 195.1 for liquid pipelines operating at or below 20 percent of the specified yield strength of the pipe.

SENATOR LAUTENBERG: Have you looked into the adequacy of the inspection procedures used by OPS?

ANSWER: The Safety Board has often addressed in its accident reports the inspection procedures of OPS and of states certified by the OPS. Most recently, the Safety Board addressed improvements needed in OPS' inspection and enforcement programs in the following Pipeline Accident Reports:

> Williams Pipe Line Company Liquid Pipeline Rupture and Fire, Mounds View, Minnesota, July 8, 1986 (NTSB/PAR-87/02);
>
> Piedmont Natural Gas Company Natural Gas Explosion and Fire, Winston-Salem, North Carolina, January 18, 1988 (NTSB/PAR-88/01); and
>
> Explosions and Fires from September 16, 1988, through March 29, 1989, Involving Kansas Power and Light Company's Natural Gas Pipeline Distribution Systems (NTSB/PAR-90/01).

The report on the Mounds View accident found that the OPS inspections had been so concentrated on pipeline operational factors related to the accident that most all other factors had been ignored, that areas of inspection within various operating divisions of the same pipeline operation were neither consistent nor thorough, that a pipeline operators previous history of compliance was not considered adequately when determining the type action taken for violations documented, and that the OPS was not adequately staffed to perform the responsibilities with which it was charged. Recommendations for corrective actions were issued to the Secretary of Transportation and to the Research and Special Programs Administration.

The report on the Winston-Salem accident found that the OPS had not established effective employee training and evaluation standards, had not taken effective enforcement actions to ensure compliance with its corrosion standards, and had not required its certified state agent to employee sufficient staff to perform timely, effective inspections of gas operations for which it was responsible. Recommendations for correction actions were issued to the Research and Special Programs Administration.

The report on the five accidents that involved KPL's gas distribution systems found that OPS' pipeline safety requirements were deficient in many respects, that OPS' monitoring of the two state agencies certified to inspect KPL's gas operations was deficient, and that OPS provided insufficient inspection and enforcement guidance to assist these state agencies in developing effective pipeline safety programs. Recommendations for corrective actions were issued to the Research and Special Programs Administration.

SENATOR LAUTENBERG: OPS inspectors rely largely on data collected and reported by pipeline operators. In your view, could the public safety be compromised by this relationship with industry?

ANSWER: There definitely exists a potential for public safety to be compromised should the OPS rely solely on data collected and reported by pipeline operators. For such data to be credible, the OPS must openly and periodically audit portions of the data submitted to verify both its content and accuracy. Such a problem potentially exists now with the annual report data provided by pipeline operators as this data is the primary data base for many analyses used to identify safety problems or to confirm the adequacy of Federal requirements for pipeline safety. Also, to a limited extent, this data is used by OPS to determine the level of inspection necessary for pipeline operators.

SENATOR LAUTENBERG: Are there adequate checks in the system to ensure that industry is collecting and reporting data in an accurate manner?

ANSWER: In 1979 and 1980, the Safety Board issued three reports that addressed the adequacy of the OPS' primary data collection systems for liquid and natural gas pipelines. (NTSB-PSS-78-1, -PSS-80-1, and -SEE-80-4.) These reports found that little effort was made to verify the accuracy of the data provided to the OPS on these annual pipeline industry reports. Although the OPS has attempted at times to improve the accuracy of transfer of this data from the forms to its computer data base, the Safety Board is not aware of any actions being taken to verify the accuracy of the information on the forms. Additionally, the Safety Board does not anticipate any change in OPS' reliance upon the industry for providing data unless the OPS' staff is substantially increased.

SENATOR LAUTENBERG: Are you at all concerned with the pace with which OPS is reviewing and publishing regulations?

ANSWER: The Safety Board is concerned that OPS action on several of our safety recommendations hinges upon the slow pace of OPS' rulemaking program. While some improvement in this program might be achieved through more efficient operations, it appears that any major improvement will require an increase in the numbers of staff assigned to OPS' regulatory program.

SENATOR LAUTENBERG: Have you looked at the adequacy of OPS' inspection force? Since OPS has been unable to reach its goal of inspecting all pipelines at least once over 2.5 years, is public safety compromised in your view due to an inadequate number of inspectors?

ANSWER: The Safety Board assessed the adequacy of OPS' inspection force in its report on the Mounds View, Minnesota, accident and found that it lacked sufficient staff. In that report, the Board stated, "To adequately protect public safety, OPS staffing needs to be augmented." For OPS' Central Region, it was found that only two inspectors were available to inspect 113 interstate pipeline operators and to monitor the intrastate pipeline inspection and enforcement program for 10 states. Consequently, the Safety Board stated that it believed that "... this number of inspectors is insufficient to allow thorough, periodic reviews of each operator. Additionally, just performing the initial review would allow no time for analyses of the various operators' performances to determine which ones require comprehensive monitoring, to actually perform any comprehensive monitoring, to participate in investigations of accidents and incidents, or to respond to public reports of potentially unsafe conditions." Based on these findings, the Safety Board recommended that the Department of Transportation:

> P-87-28 Increase, through the use of State inspection personnel and by increasing the number of Office of Pipeline Safety (OPS) inspectors, the OPS pipeline inspection capability sufficient to perform through, periodic safety reviews of all pipeline operations directly subject to OPS monitoring and to perform timely, effective, followup compliance reviews of those operations in which compliance deficiencies are identified.

The OPS Central Region was the office responsible for monitoring the two state agencies certified by OPS to inspect and enforce Federal pipeline safety standards for the gas distribution systems operated by Kansas Power and Light Company that experienced within a six-month period the five accidents referenced earlier in these comments.

While our investigation is not yet complete on the pipeline accident that occurred on October 3, 1989, in the Gulf of Mexico near Sabine Pass, testimony provided during the public hearing suggests that OPS' Southwest Region is also understaffed.

SENATOR LAUTENBERG: You are conducting an investigation of the "Buckeye" pipeline spill of this past March/April, which resulted in petroleum product leaking into the Allegheny River and endangering the Pittsburgh water supply. What can you report to us on the preliminary findings of this investigation?

ANSWER: Buckeye's pipeline no. 703 runs from its Allegheny Station near Emmaus, Pennsylvania, to its Coraopolis Terminal northwest of Pittsburg, Pennsylvania. When the release of mixed petroleum products occurred about 10:36 p.m. on March 30, 1990, the pipeline was under pressure, but product was not being pumped. The pressure monitor at Buckeye's Indiana Terminal detected and transmitted to the dispatch office at Emmaus a sudden, large drop in pressure. However, the dispatcher was not alert to the pressure drop because he was monitoring the movement of products on those pipelines that were active moving products and because the pressure monitor was not equipped with a device to alert the dispatcher to the large pressure drop. Each hour, Buckeye's monitoring system prints out for each pipeline the pressures at each monitoring point and the dispatcher is required to record on a log the hourly pressure for each location. Soon after 11:00 p.m. while the dispatcher was recording the pressure for the Indiana Terminal, he noticed the large drop in pressure from the 10:00 p.m. reading and he telephonically reported this fact to his supervisor.

The supervisor, as a precaution, instructed the dispatcher to close all remotely-operable valves on line no. 703 and he made arrangements for Buckeye employees to be dispatched to various pressure monitoring points along the route of the pipeline for the purpose of verifying the pressure in the pipeline. This was stated to be necessary because Buckeye's monitoring system previously had provided erroneous data and this initially was believed to be the problem rather than a break in the pipeline.

About 2:00 a.m. on March 31, 1990, Buckeye began alerting contractors it used to clean up product releases about the possible break in the pipeline, but at that time it did not notify the State of Pennsylvania, the National Response Center, or potentially affected local governments. The pressure checks did not confirm the break in the pipeline until 4:00 a.m. on March 31, 1990. Soon thereafter, the break was found in an area near Knapps Run north of Freeport, Pennsylvania, which had experienced a land side. Buckeye's contractor then began attempting to contain and clean up the released petroleum products. The City of Freeport learned of the spill when Buckeye's contractors were observed laying containment booms on the Alleghney River adjacent to Freeport. When the spill became publicly known, the Pennsylvania Department of Natural Resources, the U.S. Coast Guard, the U.S. Corps of Engineers, and the U.S. Environmental Protection Agency all were alerted to the problem and were mobilized to assist in the clean up and clean up monitoring activities.

The circumstances surrounding the land slide and the pipeline break are not known at this time because the failed section of pipe has not yet been recovered. The delay in recovery of this pipe section has been due to the requirement for a environmental assessment of the area and a plan for recovery that complies with Pennsylvania requirements.

The recovery of the failed section of pipe is essential to the Board completing its investigation; however, the investigation is continuing by documenting the pipeline monitoring system capabilities, Buckeye's response to the release, and the actions required of various agencies to respond to the emergency.

SENATOR LAUTENBERG: Do you believe public safety is compromised by the fact that OPS does not know where all pipelines which are subject to their regulations are located?

ANSWER: The Safety Board believes it essential that the OPS know the locations where all pipelines potentially subject to the natural gas and liquid pipeline statutes are located and as well, the identity of the persons responsible for operating each pipeline. Without such information, it would not be possible to determine which pipelines are subject to Federal jurisdiction or to perform necessary inspections to determine whether the pipelines subject to OPS jurisdiction comply with applicable safety requirements. Consequently, the Board believes that public safety could be compromised without this knowledge.

SENATOR LAUTENBERG: Have you looked into the reports of corrosion along the Alyeska pipeline in Alaska? If so, what have been your findings?

ANSWER: While the Safety Board is aware that investigations currently are being made relative to corrosion problems associated with the Alyeska pipeline, our staff has not seen nor reviewed any reports on this subject.

PENALTY PROGRAM

SENATOR LAUTENBERG: The Administrative Conference of the U.S. (an independent federal agency that provides advice on federal procedures) has issued eight recommendations concerning the FAA civil penalty assessment program calling for the transfer of the adjudicatory functions of the penalty program to NTSB. What is the status of those recommendations?

ANSWER: At this point there is a report of Professor Richard Fallon of Harvard Law School and a Committee appraisal of that report issued by the Conference's Adjudication Committee. The full Conference will consider the matter in upcoming Plenary Session, June 7, 1990.

SENATOR LAUTENBERG: Do you agree with the recommendations of the Administrative Conference?

ANSWER: Professor Fallon reached several conclusions, the most significant of which, from the NTSB standpoint, is that the civil penalty demonstration program should be continued, but that the preferable forum for adjudications under the program is the NTSB. We believe that perhaps the Safety Board is an appropriate place to house this program; however, we are concerned over the possibility of getting the responsibility without the additional resources. To give us the responsibility without giving us the additional resources would hurt both the civil penalty program and the appeals program.

Professor Fallon also reached a number of subsidiary conclusions, including interpretation of regulations, judicial review, compromise of complaints, and new rules for a "second best" approach, i.e. continued adjudication by the FAA. NTSB has not formulated any position on these recommendations.

SENATOR LAUTENBERG: NTSB now adjudicates violations in certificate proceeding (and are asking for a personnel increase in this area). What additional resources would be necessary to administer the civil penalty assessment program?

ANSWER: Based on an estimate of 1000 civil penalties and the volume of work that can be handled by an individual ALJ and appellate attorney, four-to-five ALJ's and an equal number of new attorneys would be required. There would also need to be between five and six additional staff positions. Because the size of the workload is the determining factor, and because enforcement activity fluctuates, a more precise estimate is difficult.

AVIATION APPEALS

SENATOR LAUTENBERG: The Board presently has approximately 1,000 appealed airmen revoked certificate cases on backlog. Why?

ANSWER: As recently as six-months ago the Board had approximately 900 cases on backlog, although these cases were not limited to revoked certificates, but included suspension cases, Equal Access to Justice petitions, and medical certificate denials. With the addition of two part-time ALJ's this backlog has been reduced to approximately 600 cases. The backlog was the result of an increase in workload and inadequate resources. Recent budget submissions have been designed to eliminate this problem.

SENATOR LAUTENBERG: Is FAA more aggressive in revoking airmen certificates?

ANSWER: Enforcement activity fluctuates from period to period. Following the recent collision of a commercial airliner with a private aircraft in the vicinity of Cerritos, California, FAA began actions against virtually all suspected unauthorized incursions into airport terminal controlled airspace. This resulted in a substantial increase in complaints against the certificates of pilots, although typically these were suspension, as opposed to revocation, proceedings.

SENATOR LAUTENBERG: How many new cases do you get a year?

ANSWER: Recently NTSB has received approximately 1200 enforcement cases per year.

SENATOR LAUTENBERG: Generally, why is FAA revoking these ability to fly certificates?

ANSWER: Reasons for FAA enforcement activity vary widely, though they are all based on safety considerations. Revocation, which is only one of several options available to FAA, is reserved for the most serious offenses.

ALCOHOL AND DRUGS

SENATOR LAUTENBERG: The American Association of Railroads (AAR) has been encouraging its members to inform employers of the availability and capabilities of the employer assistance programs (in the alcohol and drug areas). Have these encouragements been effective?

ANSWER: To date there are 31 AAR members, including 14 Class I railroads. All 14 of those railroads have employee assistance programs. AAR member railroads estimate a 56% success rate, as measured over a two year period, of completely rehabilitated employees who have been through formal employee assistance programs.

The Federal Railroad Administration has required since November 1, 1985 (49 CFR 219.401 subpart E - Identification of Troubled Employees) that each railroad establish and implement an employee assistance program.

The Safety Board has actively pursued the effectiveness of employee assistance programs in the railroad industry as an integral part of its accident investigations and public hearings.

SENATOR LAUTENBERG: Have associations in the other modes been as active as the AAR? If not, should they be?

ANSWER: During Safety Board investigations involving various authorities in the past several years it appears that employee assistance programs are not as aggressively encouraged as they are in the railroad industry. While results are difficult to quantify, effective employee assistance programs are believed to be a key element in the overall control of drug and alcohol abuse in the workplace.

SENATOR LAUTENBERG: Is alcohol and drug abuse as serious in the truck and air carrier areas?

ANSWER: Drug and alcohol abuse has been a recurring problem observed in highway accidents involving both large trucks and buses. The Safety Board investigated two recent intercity bus accidents involving for hire drivers. These accidents resulted in 1 fatality and 70 non-fatal injuries. The Safety Board concluded that the busdrivers' impairment due to their recent use of illicit drugs, was either a causal or a contributing factor in these accidents.

In a recent study involving heavy trucks accidents where the truck drivers were fatally injured, the Safety Board found that 33 percent of the truckdrivers tested positive for drugs and alcohol. Further, alcohol and drug use ranked second as the must frequently cited single accident cause or contributing factor.

AGING AIRCRAFT

SENATOR LAUTENBERG: In response to the aging aircraft issue, a joint industry task force was formed, including the Air Transport

Association, the Aerospace Industry Association, and the FAA. Is the NTSB part of this task force?

ANSWER: The Safety Board did not participate as a member of the joint industry task force evaluating the aging aircraft issue, however, the Board is monitoring the progress of the task force.

SENATOR LAUTENBERG: Should it be?

ANSWER: While the Board is staffed to fulfill its investigative role, it does not have the depth of personnel with specialized expertise to participate to the degree that we might wish in each ongoing area of industry research.

SENATOR LAUTENBERG: How are you contributing in this area?

ANSWER: The Safety Board makes its greatest contribution to resolving the aging aircraft issue by critically evaluating the airworthiness of transport category aircraft structures in our accident and incident investigations, by making safety recommendations, and by monitoring and commenting, when appropriate, on the proposals made by working groups such as the joint industry task force on aging aircraft.

HAZARDOUS MATERIALS

SENATOR LAUTENBERG: What is the status of the Board's "Transportation of Hazardous Materials by Rail" study?

ANSWER: The National Transportation Safety Board's proposed safety study on the "Transportation of Hazardous Materials by Rail" is scheduled to be completed by the end of 1990. Currently, the Safety Board's staff is reviewing and analyzing the 50 accidents/incidents investigated in 1988 and 1989.

BOARD MEMBERSHIP

SENATOR LAUTENBERG: List the names, dates of appointment, and membership terms of all Board members.

ANSWER: The information follows:

Member	Appointment	Term Expires
John Lauber	11-25-85	12-31-89*
Jim Burnett	12-28-81	12-31-90
James L. Kolstad	5-15-87	12-31-91
Susan Coughlin	2-09-90	12-31-93

* Member Lauber has been renominated for another five-year term that would expire 12-31-94.

SENATOR LAUTENBERG: Are there any Board openings? Please describe the positions open (how long, termination date).

ANSWER: The Board has one member vacancy caused by the death of Member Joseph T. Nall in an aviation accident on November 27, 1989. That term expires on December 31, 1992.

SENATOR LAUTENBERG: In filling Board positions, what general or specific criteria is used, i.e., what are the requirements regarding political party, and labor, management, and modal experience?

ANSWER: As stated in 49 USC 1902, no more than three members of the Board shall be of the same political party. At any given time, no less than three members of the Board shall be individuals who have been appointed on the basis of technical qualification, professional standing, and demonstrated knowledge in the fields of accident reconstruction, safety engineering, human factors, transportation safety, or transportation regulation.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

AVIANCA AVIATION ACCIDENT

SENATOR D'AMATO: What is the status of your plans to hold a hearing on the Avianca crash near Cove Neck, Long Island on January 25, 1990?

ANSWER: The National Transportation Safety Board's (NTSB) hearing is scheduled to begin June 20, 1990 and is expected to last two days. It will be held at the Royce Carlin Hotel in Melville, New York.

SENATOR D'AMATO: What issues will be examined at the Hearing?

ANSWER: Issues to be covered by the hearing will be: Federal Aviation Administration (FAA) certification and surveillance procedures for foreign air carriers operating in the U.S. under Part 129 of the Federal Aviation Regulations; management of air traffic flow control; air traffic communications procedures during the evening of the accident and in general; and FAA requirements for dispatch, flight following, fuel reserves and alternate airports for Part 129 operators.

SENATOR D'AMATO: Do you expect that the issue of requiring the use of child safety seats will be explored?

ANSWER: No. This issue was covered in safety recommendation A-90-78 and -79 issued to the FAA on May 30, 1990. Those recommendations stated:

> Revise 14 CFR 91, 121 and 135 to require that all occupants be restrained during takeoff, landing, and turbulent conditions, and that all infants and small children below the weight of 40 pounds and under the height of 40 inches be restrained in an approved child restraint system appropriate to their height and weight.
>
> Conduct research to determine the adequacy of aircraft seatbelts to restrain children too large to use child safety seats and to develop some suitable means of providing adequate restraint for such children.

DRUG TESTING

SENATOR D'AMATO: I recently introduced S. 2434, which would permit UMTA's drug testing rule for transit employees to take effect. Do you believe that drug testing is proving helpful in preventing more transportation accidents?

ANSWER: The National Transportation Safety Board believes that drug testing will be helpful in preventing transportation accidents. As the result of the Safety Board's investigation of a rear-end collision of two Metro-Dade Transportation Administration trains in Miami, Florida, on June 26, 1985, the Safety Board recommended that the Urban Mass Transportation Administration:

> Require that all employees involved in a rail rapid transit accident with fatality, injury, or property damage be tested in a timely manner for alcohol and drugs.
>
> Require rail rapid transit systems to screen for drug and alcohol abuse all prospective and transferred employees prior to employment in safety-sensitive positions.
>
> Require the removal of employees from safety-sensitive positions if the rail rapid transit medical department determines that the employees' use of a prescription drug will affect their work performance.

In the Safety Board's 1988 safety study addressing alcohol and drug use and its impact on railroad safety, the Board recommended that UMTA:

> Require periodic medical examinations, including alcohol and drug screening, for rail rapid transit employees in safety-sensitive positions.

The Safety Board supports the implementation of a comprehensive anti-drug program rule, including toxicological testing of employees after transportation accidents.

SENATOR D'AMATO: Do you have any statistics available regarding drug use in the transit industry?

ANSWER: The National Transportation Safety Board does not have statistics on drug use because there is not any systematic reporting of such use by the transit industry to any Federal agency. The Safety Board has investigated accidents on transit systems involving the use of drugs by transit employees. For example, a rear-end collision involving two SEPTA transit cars on January 26, 1987, at Ardmore, Pennsylvania resulted in eighteen injured passengers. The Safety Board determined that the probable cause of this accident was the failure of the engineer/operator of the SEPTA train to comply with the approach and stop signal, due to impairment caused by drug use.

NEW YORK CITY TRANSIT AUTHORITY

SENATOR D'AMATO: Your testimony indicates that upon investigating a collision between New York City Transit Authority (TA) trains, the Board found many deficiencies in the TA (e.g., maintenance problems, failure to enforce operating rules.) The Board made 10 recommendations to the TA. What is the status of the TA's response to your recommendations?

ANSWER: The Board has not yet received a reply from the TA.

SENATOR D'AMATO: Has safety improved on the New York subway system?

ANSWER: The Safety Board reviewed 7 years 5 months of accident history of the NYCTA. The areas examined were collisions and derailments in the subway system. Although there was a significant reduction in these types of accidents from 1983 through 1985, there has been no clear trend since then. Based on the accident rate during the first five months of this year, the accidents for 1990 could equal the high of 1983. It is also noteworthy that in the last year and a half the percentage of accidents which are related to employee performance have increased significantly. The following table shows the relevant data.

Year	No. of Accidents	% Employee Performance
1983	54	24
1984	42	28
1985	26	27
1986	34	20
1987	33	12
1988	42	17
1989	29	72
1990 (5 months)	22	86

QUESTIONS SUBMITTED BY SENATOR KASTEN

LTS-101 HELICOPTER ENGINE

SENATOR KASTEN: The LTS-101 helicopter engine has a long history of problems both in the commercial fleet and in the Coast Guard fleet. I understand there have been 154 reported failures, 14 fatalities, and a number of "hard landings." Recently, a Florida family was killed in the crash of a LTS-101 equipped helicopter. The Coast Guard uses HH-65 helicopters with LTS-101 engines for search and rescue missions in the Great Lakes area.

I am concerned with the availability of helicopters which are down for frequent maintenance and also concerned with the safety of persons being rescued.

What is the difference between an accident vs. a "hard landing"? Who determines which designation is given? What are the NTSB responsibilities in connection with each?

ANSWER: A hard landing becomes an "accident" when major structural damage or serious or fatal injuries result. The determination as to which occurrences are classified accidents rests with NTSB staff -- typically in our Regional offices. NTSB investigates all civil aviation "accidents" occurring in the United States. We investigate about 2,800 aviation accidents and 100 - 150 incidents each year.

SENATOR KASTEN: How many lives have been lost because of LTS-101 problems.

ANSWER: There have been four fatalities as a result of LTS-101 engine failures in flight. In March 1990, an Aerospatiale AS350D, a single engine helicopter, ditched in the Atlantic Ocean enroute to the Bahamas following an engine failure. The pilot and two passengers egressed the helicopter uninjured. The overturned helicopter was found some 17 hours later. The two passengers, both in their 60s, drowned. The pilot was rescued. In October 1985, the No. 1 engine on a Bell 222UT failed during the final approach to an off shore oil rig platform. The helicopter crashed tail low into some pressurized natural gas components and caught fire. The pilot and one of the 7 passengers were killed. Examination of the No. 1 engine revealed that two blades of the compressor turbine wheel had fatigued and lodged against the nozzle vanes. Performance data indicated that a successful landing could have been made with the power available from the No. 2 engine.

SENATOR KASTEN: Is the turbine wheel the only problem with the LTS-101?

ANSWER: No. Power turbine wheel blade cracking has been the most prevalent problem on LTS-101 engines. Other service problems have been: 1) compressor blade cracks and separations; and 2) failure of the bearings which support the power turbine shaft due to lack of lubrication caused by coking of the internal oil passages. Design changes and additional periodic inspections required by FAA airworthiness directives have minimized the compressor blade and bearing failure occurrences.

SENATOR KASTEN: What criteria are used to arrive at a recommendation to ground the LTS-101 fleet?

ANSWER: The LTS-101 engine service history has been affected by the in service problems associated with the power turbine wheel blade cracks. There have been 154 power turbine wheel blades that have been found cracked during inspections (not 154 failures).

It is difficult to list or document the considerations for recommending grounding of an engine, airplane, or helicopter. Each case, most likely, will be unique. It is essential to establish if the item in question is airworthy and whether it meets the Federal requirements to which it was certified. If components of an engine are failing and the results of the failure are catastrophic to the helicopter, passengers, and crew, a grounding recommendation, until the situation is rectified, is warranted.

SENATOR KASTEN: Why has no recommendation been given to the FAA to ground the commercial fleet?

***Note: Even though the FAA would ground the commercial fleet, this grounding would not affect the Coast Guard fleet.

ANSWER: An NTSB safety recommendation declaring the LTS-101 engine unairworthy would not be limited to the commercial fleet. Such a recommendation would also be made to any user of the engine whether it be Coast Guard, military, or foreign operators. NTSB staff is presently evaluating a safety proposal regarding this matter. We will be certain to forward a copy to the Committee should it be adopted by the full Board.

AVIATION APPEALS

SENATOR KASTEN: You indicate the need for additional people in your aviation appeals program. Under some proposals relating to the FAA's Civil Penalty Demonstration Program which has a temporary extension, more adjudication of certificate violations would be handled by the NTSB. Can the NTSB handle these when you stress in your statement your shorthanded situation in this area right now?

ANSWER: The Safety Board is currently receiving approximately 1,200 appeals per year that are initially handled by our staff of six administrative law judges. Approximately 300 appeals per year from law judge decisions or orders are received by the full five-Member Board. These further appeals to the Board are handled by the General Counsel's office. That office has a total of five attorney positions (including the General Counsel), but only about one-half of these resources (or 2.5 attorney years) can be allocated to the appeals function because of the other legal services required by the Board. The Board's resources devoted to the certificate action appeal function have, therefore, been clearly outstripped by the rapidly increasing workload, with the result that a sizeable backlog of cases has developed both in the law judge's office and in the General Counsel's office.

We believe that perhaps the Safety Board is an appropriate place to house the civil penalty program; however, we are concerned over the possibility of getting the responsibility without the additional resources needed. To give us the responsibility without giving us the additional resources would hurt both the civil penalty program and the appeals program.

It is anticipated that there will be roughly 1,000 civil penalty case requests for formal hearings per year. If these estimates are accepted, the NTSB would need four or five new law judges and four or five more full-time attorneys to absorb the civil penalty cases now assigned to the FAA and its parent the DOT. Since one new ALJ and one new attorney position require one additional support position, we anticipate needing a total of 12-15 additional positions just for the civil penalty program, assuming that the program would generate 800 - 1,000 appeals to this agency.

QUESTIONS SUBMITTED BY SENATOR DOMENICI

AGING AIRCRAFT

SENATOR DOMENICI: I share your concern, Mr. Chairman, about the statistics you cite that the number of fatal scheduled air carrier aviation accidents in 1989 was at the highest level since 1968 -- 21 years ago. As you mention in your testimony, a wide variety of factors come into play in such accidents. Could you provide for the record the results of the Board's investigations into these fatal accidents in 1989, and the factors to which you attributed them?

ANSWER: At this time, the probable cause has been determined for two of the eight fatal accidents involving Scheduled 14 CFR 121 accidents for 1989. The explosive decompression of a United B-747 was caused by an improperly latched cargo door. The design of the door's locking mechanism made it susceptible to damage due to improper operation. An improperly latched cargo door was also the probable cause of the crash of an Evergreen DC-9 cargo flight. The crew was attempting to land when they lost control of the airplane for undetermined reasons.

In 1988 there were three fatal accidents in Scheduled Part 121 operations. One of those was the bombing of Pan Am Flight 103 over Lockerbie Scotland. The remaining two accidents both involved aircraft cause/factors. An Aloha Airlines B-737 suffered a major structure failure and explosive decompression. In the takeoff accident involving Delta Flight 1141 at Dallas/Ft. Worth Airport, the Board found that the flight crew's inadequate cockpit discipline resulted in their attempt to takeoff without the wing flaps and slats properly configured. In addition, the Board cited the failure of the B-727's takeoff configuration warning system as a part of the probable cause.

SENATOR DOMENICI: Specifically, in how many cases did the NTSB find structural problems that directly caused, or was a major factor, in an aviation accident.

ANSWER: Of the five fatal accidents described above, the United cargo door tearaway and the Aloha fuselage failure were major structural failures.

SENATOR DOMENICI: I am terribly concerned about the safety of commercial aircraft in an aging fleet. Over the past two years, we have begun to see the serious implications of an aging fleet. U.S. airlines are now operating the oldest fleets in aviation history with the average age of the fleet, approximately 3,300 planes, being 13 years. About one-third of these planes are actually 20 years or older. They have, in fact, reached their designed economic life.

In your testimony, you refer to several instances where significant cracking in airplane fuselages were detected. Fortunately, accidents were avoided in these cases. However, the April 1988 Aloha Airlines decompression and structural failure was not discovered in advance, and a tragedy was miraculously avoided.

From your statement, it appears that the detection of these structural cracks was extremely lucky. During a visual inspection, there was a visible crack that proved to be far more significant (from 20 to 35 inches long) when investigated. Is that the case?

ANSWER: The Safety Board is aware of one instance of a fortuitous detection of a large crack by casual visual observation. In this case, a large lap joint crack was observed from a distance of 10 or more feet by maintenance personnel who were not engaged in an examination of the fuselage for cracks. Part of the crack was hidden from view behind a seam and not visible until investigated further.

SENATOR DOMENICI: I find it astonishing that with America's scientific expertise that the aviation industry still largely depends upon manual, or visual, inspection techniques for aircraft maintenance. It seems to me that these safety problems are largely preventable through the utilization of this nation's scientific and technological expertise. It is precisely this matching of technology to industry's needs that the federal government needs to encourage to address these critical areas and to keep the United States' competitive edge.

I have shared with the Secretary of Transportation and the FAA Administrator an innovative proposal to establish Nondestructive Evaluation Centers (NDEs), which would develop and demonstrate how state-of-the-art technology can improve the inspection, maintenance, and safe operation of commercial aircraft. This proposal has been developed by a consortium of Sandia National Laboratory, New Mexico State University, and the Science

Applications International Corporation. This consortium has a depth of experience in the technologies that have been successfully, and cost-effectively, used by the military to assess the structural integrity of aircraft and their mechanical systems.

The consortium has recently attended international conferences on the subject of aging aircraft, and is making a concerted effort to work with the airlines, the aviation industry, and aviation personnel through the joint industry task force to further refine this concept.

What is your general assessment of the current system of aviation inspections? Might not the aging aircraft issue, specifically, be more adequately addressed with the use of state-of-the-art technology designed to survey the structural integrity of such aircraft and their systems?

ANSWER: Visual (and close) inspection techniques (up to a magnified factor of 10) remain a very effective method for efficiently examining large areas. Other more advanced techniques are more site specific and tend not to be effective in large numbers of locations or in large areas because of the monotonous, repetitious, and slow nature of the work.

We believe that non-destructive inspection (NDI) techniques, including close visual and eddy current, can be used effectively to detect cracks in the air carrier fleet.

Advanced techniques, including acoustic emission and ultrasonic, are currently being studied with regard to their increased applications in air carrier maintenance.

SENATOR DOMENICI: Is there any other way to develop the data we need on aging aircraft other than the development of baseline information through such technologically-oriented inspections?

ANSWER: Baseline data is derived from air carrier experience as reported to the manufacturer and the FAA, and as compiled in required Service Difficulty Reports. These reports are not limited to visual observations of cracks and are readily available for study.

DRUG AND ALCOHOL TESTING

SENATOR DOMENICI: I want to commend you for highlighting the ongoing need to crack down on drug and alcohol abuse in all modes of transportation. As you point out, progress has been made by DOT in promulgating drug testing rules for all modes of transportation. You note, however, that the Board has concerns about certain weaknesses and inconsistencies in these rules.

Would you briefly summarize for the Subcommittee the recommendations NTSB has made to the Department to bring uniformity into these alcohol and drug testing regulations for all modes of transportation?

ANSWER: The safety recommendations issued follow:

> Develop postaccident and postincident testing regulations that are separate from the pre-employment, random, and reasonable suspicion testing regulations in all modal agencies.
>
> Adopt uniform regulations for all drug and alcohol testing, other than postaccident and postincident testing, in all transportation modes, including U.S.

Department of Transportation employees who are in safety sensitive positions.

Adopt uniform regulations on postaccident and postincident testing of private sector employees for alcohol and drugs in all transportation modes. Use the Federal Railroad Administration's (FRA) current regulation as a model regulation for all transportation modes except for the permissible blood alcohol level of less than 0.04 percent. Using the FRA regulation as a model for other transportation modes refers only to the collection of blood and urine and the screening and confirmation of positives in blood. As a minimum, the drugs identified in FRA screen should be used in the other modes. Reference to the FRA model does not refer to the administration or implementation of the regulation. The Safety Board recognizes that the implementation of the regulation may be different in the various transportation modes. The regulations for all modes should provide:

o for the collection of blood and urine within 4 hours following a qualifying incident or accident. When collection within 4 hours is not accomplished, blood and urine specimens should be collected as soon as possible and an explanation for such delay shall be submitted in writing to the administrator;

o testing requirements that include alcohol and drugs beyond the five drugs or classes specified in the Department of Health and Human Services (DHHS) guidelines and that are not limited to the cutoff thresholds specified in the DHHS guidelines. Provisions should be made to test for illicit and licit drugs as information becomes available during an accident investigation.
Adopt uniform regulations in postaccident and postincident testing of U.S. Department of Transportation employees in safety sensitive positions. The regulations should provide:

o for the collection of blood and urine within 4 hours following a qualifying incident or accident. When collection within 4 hours is not accomplished, blood and urine should be collected as soon as possible and an explanation for such delay shall be submitted in writing to the administrator by the local official making the decision to test;

o testing requirements that include alcohol and drugs beyond the five drugs or classes specified in the Department of Health and Human Services (DHHS) guidelines and that are not limited to the cutoff thresholds specified in the DHHS guidelines. Provisions should be made to test for illicit and licit drugs as information becomes available during an accident investigation;

o that toxicological results for Federal employees be made available to investigators of the National Transportation Safety Board;

o procedures by which Federal employees are sent to the nearest hospital or medical facility for obtaining blood and urine specimens for toxicological testing following a qualifying incident or accident.

Issue rules specifying zero (no alcohol) as the blood alcohol concentration for private sector employees in safety sensitive positions in all transportation modes and for Federal employees in safety sensitive positions.

SENATOR DOMENICI: When were these recommendations forwarded to the Department?

ANSWER: The safety recommendation letter was forwarded to the Secretary on December 5, 1989.

SENATOR DOMENICI: What action has the Department taken on these recommendations.

ANSWER: The Department has yet to respond to the abovementioned safety recommendations.

SENATOR DOMENICI: Has the Secretary given you any assurances that these inconsistencies will actually be addressed?

ANSWER: No. However, this matter will be discussed in a meeting with the Secretary and the NTSB Chairman to be held July 2, 1990.

QUESTIONS SUBMITTED BY SENATOR GRASSLEY

BATAVIA, IOWA AMTRAK ACCIDENT

SENATOR GRASSLEY: Recently there was a derailment of an Amtrak train near Batavia, Iowa. When do you anticipate the NTSB study to be completed concerning this derailment?

ANSWER: The report of the investigation of the Amtrak train derailment near Batavia, Iowa is expected to be completed no later than February 1991.

SENATOR GRASSLEY: When Congress enacted the Department of Transportation Act for FY 89, $26,000,000 was included for the Northeast Corridor improvement program and report language stated that money was obligated for necessary expenses for installation of baggage restraints, seat back guards and a seat-lock device on 348 passenger cars operating within the Northeast Corridor. Since safety is a national issue, why aren't safety devices such as the seat-lock devices being installed on all of Amtrak's cars?

ANSWER: Seat-lock devices are being replaced on all Amtrak cars. Amtrak has advised that to date it has retrofitted or replaced seat-locks in 51 percent of the AmFleet I cars, 100 percent of the AmFleet II and Horizon cars, and 36 percent of the superliner cars with all retrofitting expected to be completed during 1993.

SENATOR GRASSLEY: What is the present status of the installation of anti-swing lock devices on trains in the Northeast Corridor?

ANSWER: The Safety Board has obtained from Amtrak the following information regarding the installation of seat-lock devices on the Northeast Corridor trains:

AmFleet I (Used on Northeast Corridor)

Coach Fleet Size	472 cars
Completed installation	243 cars
Cars in shop for installation	10 cars

AmFleet II (Used on Northeast Corridor)

Coach Fleet Size	124 cars
Completed installation	124 cars

CONCLUSION OF HEARINGS

SENATOR LAUTENBERG. This concludes our hearings on the transportation bill for 1991. The subcommittee will recess and reconvene at the call of the Chair.

[Whereupon, at 12:13 p.m., Wednesday, May 16, the hearings were concluded and the subcommittee was recessed, to reconvene subject to the call of the Chair.]

MATERIAL SUBMITTED BY AGENCIES NOT APPEARING FOR FORMAL HEARINGS

[CLERK'S NOTE.—The following agencies of the Department of Transportation did not appear before the subcommittee this year. Chairman Lautenberg requested these agencies to submit testimony in support of their fiscal year 1991 budget request. Those statements and answers to questions submitted by the chairman follow:]

DEPARTMENT OF TRANSPORTATION

OFFICE OF THE SECRETARY

STATEMENT OF ELAINE CHAO, DEPUTY SECRETARY

Mr. Chairman and members of the Committee, I am pleased to have the opportunity to appear before your Committee to discuss the fiscal year 1991 budget request for the Office of the Secretary of the Department of Transportation. As you know, this has been an eventful year for the Department as we developed the National Transportation Policy (NTP) and dealt with natural disasters and other issues of the day. Throughout, we have appreciated the cooperation and support we have received from this Committee.

Before discussing the specific details of this budget, I would like to summarize the range of our management activities and accomplishments which reflect the Secretary's balance between setting policy and management goals and delegating operational responsibility to the modes.

o The National Transportation Policy established strategies and goals for the future direction of DOT programs. As a follow-on to the NTP, OST is coordinating an assessment of whether we are staffed and organized efficiently to address the issues raised in the NTP. OST is also coordinating intermodal studies -- such as in the high speed surface transportation area — to flesh out the strategies of the NTP.

o OST worked hand-in-hand with FAA to fashion the FAA reauthorization proposal, which, as the first major opportunity to implement the key themes of the NTP, includes establishing a local airport financing mechanism through Passenger Facility Charges and increased Federal funding to respond to aviation needs.

o Secretarial leadership in several areas has reinforced the activities of individual modes. Just yesterday, Secretary Skinner gathered over 500 DOT managers and employees to listen to former DOT officials provide their perspectives on the mission, potential, strengths and weaknesses of DOT. Other people with varied backgrounds outside DOT discussed organizational and management issues. Focus groups are planned and eight "listening sessions" are scheduled through July 3.

o The recently completed airline competition study was the most comprehensive review by DOT to date of the results of airline deregulation. Similarly, we are in the midst of a review to evaluate various options for the Federal Government's role in the future of the commercial space transportation industry as well as the maritime industry.

o We are continually seeking ways to improve the efficiency of DOT management and operations. This includes efforts to consolidate DOT into a single building; expand the use of automation to reduce paperwork and increase responsiveness; and strengthen our internal management controls by improving our accounting and payroll systems.

o In addition to managing the Department's internal drug testing program, the Secretary has established, in his immediate office, an office to oversee implementation of our industry drug rules and coordinate drug and alcohol policy.

o On December 18, 1989, formal filing of international passenger fare tariffs began on the electronic tariff system. By allowing the tariffs to be filed electronically rather than on paper, a savings of time to the airline industry of over 83,000 hours has already been realized. On an annual basis, we estimate this savings to the airline industry and in benefits to customers to be in excess of $30 million. And the backlog for processing filings has decreased from four weeks to two days.

To carry out our departmental oversight and management responsibilities, we are requesting appropriations totalling $102.7 million for all OST accounts. This is a 4.8 percent increase over the FY 1990 enacted level and supports a total employment level of 1,022 FTE, about equal to the FY 1990 enacted level.

SALARIES AND EXPENSES

The Salaries and Expenses appropriation, at $60.1 million, will provide for the overall management and direction of the programs of the Department. Within our requested level, staffing reductions are proposed for the Essential Air Service office consistent with the proposed phasedown of the subsidy program.

Funding at the requested level is critical to the effective management of the Department's programs. In the past three years Congress has reduced our request by an average of $3.5 million annually, or about 5 to 6 percent. These reductions have made it more difficult to carry out our management oversight responsibilities. The budget request supports 621 FTE, a 1.4 percent reduction from the FY 1990 enacted level. The Secretary has made it quite clear that he wants DOT to be lean and efficient. Yet such streamlining does not happen overnight and we need the requested resource level to carry out our responsibilities in the meantime.

We appreciate the increased transfer authority of five percent enacted for FY 1990. However, we are requesting a lump sum appropriation for Salaries and Expenses in FY 1991. Office-by-office appropriations limit our flexibility to direct resources to respond to issues as they arise. Given our good working relationship with the Committee, we do not believe this constraint is justified, especially in light of the fact that only one other cabinet agency receives such treatment.

We are also proposing to repeal the spending cap on advisory committees. Nevertheless, we are attuned to your concerns about the level of spending on advisory committees. In fact, we have identified four non-statutory advisory committees that will be terminated by the end of FY 1991.

OFFICE OF COMMERCIAL SPACE TRANSPORTATION
Operations and Research

We are proposing that funding for the Office of Commercial Space Transportation be budgeted separately to reflect its growing importance within the Department. The request of $4.5 million is 7.6 percent above the comparable FY 1990 level. We estimate as many as 40 commercial launches in FY 1991 as opposed to 10 to 15 launches projected in FY 1990. Increased launch activity and the potential for new private space facilities will generate a twofold increase in licensing activity and in the number of inspection trips needed to ensure the safety of the launches and launch facilities.

TRANSPORTATION PLANNING, RESEARCH, AND DEVELOPMENT

Our request of $4.0 million for Transportation Planning, Research, and Development is the Secretary's only direct source of discretionary funds available for intermodal studies and research to help shape the policies, programs and direction of the Department. Against a total budget of $27 billion, $4 million is a small investment for critical special studies and analyses to strengthen the policy underpinnings of the Department.

PAYMENTS TO AIR CARRIERS

We are requesting $23.6 million for payments to air carriers under the Essential Air Service program. Unlike past Administration budgets that proposed to eliminate funding, this budget proposes a 23 percent decline from the FY 1990 level and continues an orderly phaseout of the program over time. We plan to continue and tighten the subsidy eligibility criteria initiated in FY 1990, with the support and direction of this Committee. At our requested level, we would reduce serviced by $2.4 million, which will likely require ending service to about eight to twelve communities (based on the average cost of $225,000 per subsidized point of service).

WORKING CAPITAL FUND

We are requesting obligation authority of $157.3 million for the Working Capital Fund — including an obligation limitation of $146.8 million and a direct appropriation of $10.4 million. The request supports several initiatives which will strengthen our internal controls such as: continued implementation of the Departmental Accounting and Financial Information System, and design and testing of the Uniform Procurement Management System. This system, when operational, will help us to respond to the Inspector General's (IG) criticism that current DOT procurement systems are independent of the accounting and financial systems. Another example is the upgrade of the payroll system to integrate two separate systems now used in the Department, which the IG has also identified as an area of vulnerability.

This increase is especially critical because the cost-absorptions and budget reductions imposed in FY 1990. The Department's Working Capital Fund is the only working capital fund in the Federal government encumbered by an obligation limitation. To the extent the limitation is reduced, it prevents us from providing services planned and budgeted by the modes that would likely be more expensive if procured separately by the modes.

I look forward to working with the Committee during the FY 1991 Appropriations process and urge the Committee to provide the requested funds for the Office of the Secretary.

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

DRUG PROGRAMS

SENATOR LAUTENBERG: List by mode and account the anti-drug programs of the Department. Include a brief description of the program and compare the FY 1990 funding level with the FY 1991 budget request.

ANSWER: Requested information follows:

ANTI-DRUG PROGRAMS
1991 BUDGET
($ in millions)

Mode/Account	FY 1990 Enacted	FY 1991 Request	Key Elements of FY 1991 Request
Drug Interdiction Programs:			
Coast Guard			
Operating Expenses	$559.2	$602.6	Funding to recrew vessels completing the FRAM process, and to operate and maintain new helicopters and land-based aerostats.
AC&I	$111.0	$124.4	Acquisition and renovation of equipment and facilities supporting interdiction, including: 378' FRAM; 210' MMA; OPBAT MRR helicopter replacement; and TALON tiedown system. FY 1991 request amount reflects an allocation of the cost of multi-mission assets to interdiction activities, based on actual operational usage.
R&D	$ 4.8	$ 4.5	Evaluation of high technology drug surveillance and detection sensors. Design/evaluate improved law enforcement information, communications, and command and control system.
Total Coast Guard	$675.0	$731.5	
FAA			
Operations	$ 18.5	$ 23.0	Supports activities of enforcement agencies charged with responsibility to interdict aircraft entering the U.S. with drugs ($5.9M in 1990 and $6.7M in 1991). Supports random, pre-employment and periodic drug testing of agency personnel, including employee assistance ($7.1M in 1990 and $7.7M in 1991). Supports activities to review and approve industry drug abatement programs, and upgrades to the Airmen/Aircraft Registry ($5.5M in 1990 and $8.6M in 1991). This includes $1.6M that will be collected in user fees associated with the Registry.
Facilities and Equipment	$ 3.9	$ 10.0	Funding for modernizing and upgrading the Airmen/Aircraft Registry.
Total FAA	$ 22.4	$ 33.0	
NHTSA			
Operations & Research	$ 3.8	$ 6.4	Provides funding mainly for training of local police on drug recognition procedures (DEC) and the National Driver Register (NDR).
Highway Traffic Safety Grants	$ 2.3	$ 3.3	Provides Section 402 and 408 funds to address drug countermeasures.
Total NHTSA	$ 6.1	$ 9.7	

FHWA			
Motor Carrier Safety	$ 1.5	--	Support of Operation DEACON (to stop operators from driving while drugged and to intercept drugs moved by truck) and a New Jersey demo on enforcement and education.
Subtotal Interdiction Programs	$705.0	$774.2	
Drug Testing Programs:			
FRA			
Railroad Safety	$ .5	$ .6	Funding of post-accident drug tests and industry drug testing monitoring.
UMTA			
Research and Training	$ .5	$ .5	Assists transit agencies in establishing drug programs; publish information on drug prevention under UMTA drug testing rules.
Discretionary Grants	$ .3	$ .3	Innovative program to encourage States to take active role in development of drug programs.
OST			
Salaries & Expenses	$ .5	$ .5	Internal drug testing program for the Department with an assumed testing rate of 50% of the number eligible for random testing. Virtually all testing funded by reimbursements from the Operating Administrations. Does not include $4.9 million in 1990 and $5.2 million in 1991 also included in FAA amounts above.
Subtotal Drug Testing	$ 1.8	$ 1.9	
Total	$706.8	$776.1	

SENATOR LAUTENBERG: Please provide by agency the amount the Department spends in drug education and awareness. Compare the FY 1990 funding level with the FY 1991 budget request.

ANSWER: The Department's Drug-Free Workplace Program funding level for employee education and awareness for FY 1990 is $158,000. The FY 1991 budget request is $167,000. Each DOT operating administration budgets for these amounts in proportion to total DOT employment, i.e., FAA represents 47% of the Department's workforce and therefore funds 47% of the Department's Drug-Free Workplace Program budget for education and awareness. Specific funding levels are listed below:

DOT ADMINISTRATION	FY 1990	FY 1991
Office of the Secretary	$1,738	$1,837
United States Coast Guard	68,888	72,812
Federal Aviation Administration	74,260	78,490
Federal Highway Administration	5,688	6,012

Federal Railroad Administration	948	1,002
National Highway Traffic Safety Administration	1,106	1,169
Urban Mass Transportation Administration	790	835
St. Lawrence Seaway Development Corporation	316	334
Maritime Administration	2,528	2,673
Research and Special Programs Administration	1,106	1,169
Office of Inspector General	632	668
TOTAL	$158,000	$167,000

SENATOR LAUTENBERG: What inter-agency drug intelligence gathering efforts or drug intelligence centers do DOT agencies participate in, and what are the costs involved for participating in these joint intelligence centers?

ANSWER: The Coast Guard participates with other law enforcement agencies, notably DEA and Customs, at the El Paso Intelligence Center (EPIC), and Command, Control, Communications and Intelligence Center East (C31-East) in Miami. It also participates in the Defense Department's Joint Task Force (JTF),Four in Key West, FL and Five in Alameda, CA. The cost of providing 33 Coast Guard intelligence personnel to these centers is approximately $1.6 million as follows: $445 thousand at EPIC, $306 thousand at C3I-East, $701 thousand at JTF Four and $148 thousand at JTF Five.

SENATOR LAUTENBERG: By mode, briefly describe the DOT Drug Policy rules and regulations in effect that affect those modes:

ANSWER: On December 1, 1989, the Department of Transportation's Office of the Secretary issued a final rule 49 CFR Part 40 "Procedures for Transportation Workplace Drug Testing Programs". The final rule concerns testing procedures applicable to drug testing programs which the Department requires in six transportation industries. The rule establishes procedures to be used by the Department's operating administrations in regard to testing procedures. The covered administrations include the Federal Aviation Administration, Federal Railroad Administration, Federal Highway Administration, United States Coast Guard, Urban Mass Transportation Administration, and the Research and Special Programs Administration. These modal administrations all issued final rules on November 21, 1988 subjecting some 4,000,000 transportation industry employees to drug testing. The 49 CFR Part 40 rule follows closely the Department of Health and Human Services (DHHS) Guidelines entitled "Mandatory Guidelines for Federal Workplace Drug Testing Programs" published April 11, 1988. The DHHS Guidelines include procedures for collecting urine samples for drug testing, procedures for transmitting the samples to testing laboratories, testing procedures, procedures for evaluating test results, quality control measures applicable to the laboratories, recordkeeping and reporting requirements, and standards and procedures for DHHS certification of drug testing laboratories. The intent of the Guidelines is to safeguard the accuracy and integrity of test results and the privacy of individuals who are tested. Categories of testing include pre-employment, periodic, post-accident, reasonable cause, and random testing. Drugs tested for under the Department of Transportation authority are marijuana, cocaine, amphetamines, phencyclidine (PCP), and opiates.

Federal Aviation Administration

Federal Aviation Administration - 14 CFR Part 121 "Anti-Drug Program for Personnel Engaged in Specified Aviation Activities": The rule requires specified aviation employers and operators to submit and to implement anti-drug programs for personnel performing sensitive safety and security related functions. The Federal Aviation Administration rule requires domestic air carriers, commercial operators of large aircraft, commuter airline and air taxi operators, and other commercial operators to conduct testing. The following employees must be tested under an FAA-approved program: Pilots, flight engineers, flight navigators, aircraft dispatchers, mechanics, repairmen, flight attendants, aviation security screeners, ground security coordinators, non-FAA controllers, and ground instructors. The rule does not apply to private and corporate pilots. However, pilots engaged in commercial activities such as crop dusting, banner towing, and ferry or training flights must be in compliance by April 1991. Testing programs have begun in all air carrier classes except the Part 135 carriers with less than 11 employees who must be in compliance by August, 1990.

Federal Railroad Administration

Federal Railroad Administration - 49 CFR Parts 217, 219, and 225 "Control of Alcohol and Drug Use in Railroad Operations": Since 1985, railroad employees have been subject to a Federal Railroad Administration program that requires pre-employment and post-accident testing and a treatment and counseling program designed to promote self-help for troubled employees; it also authorizes reasonable cause testing. The 1988 FRA rule strengthens the existing program with the addition of random testing. Employees covered by the rule include those directly involved in the movement of trains, such as engineers, brakemen, dispatchers, block operators, signal maintainers, and conductors. Random testing for class I & II railroads has been implemented; class III railroads must implement random testing no later than November 1, 1990.

Federal Highway Administration

Federal Highway Administration - 49 CFR Part 391 "Controlled Substances Testing: The rule sets forth the regulations to require motor carriers who operate commercial motor vehicles in interstate commerce to have an anti-drug program including testing of commercial motor vehicle drivers for the use of controlled substances. Interstate motor carriers are required to develop drug testing programs covering drivers of trucks with a gross weight of 26,001 pounds or more, trucks of any size transporting hazardous materials in a quantity requiring the vehicle to be placarded under DOT regulations, and buses designed to carry more than 15 passengers. Under the Federal Highway Administration rule, owner-operators of trucks can be tested by a motor carrier with whom they have a contract or by making their own arrangements, such as through a consortium of owner-operators.

Random testing and certain mandatory post-accident testing was enjoined by the courts and is therefore deferred. Motor carriers with 50 or more drivers have implemented all other types of testing and motor carriers with less than 50 drivers must be in compliance by December 21, 1990.

United States Coast Guard / Merchant Marine

United States Coast Guard - 46 CFR Parts 4, 5, and 16 "Programs for Chemical Drug and Alcohol Testing of Commercial Vessel Personnel": The United States Coast Guard issued a rule requiring the establishment of anti-drug programs to reduce the incidence of drug abuse by commercial vessel personnel. The rule requires marine employers to conduct drug testing programs for merchant mariners who perform duties directly affecting the safety of vessel operations. Any licensed or documented seaman, whether or not he is a member of the crew, is subject to the rule.

This is designed to included federal pilots operating aboard vessels. Anyone engaged to work in a sensitive safety position aboard a vessel that is required to be operated by a licensed or documented seaman is subject to the rule. This includes state-employed pilots, certain industrial personnel and undocumented crew members. Self-employed vessel operators are covered by the rule. In December of 1989, the U.S. District Court for the District of Columbia enjoined the implementation of random testing until the Coast Guard amends the rules to restate the categories of covered employees. Random testing is thereby suspended. Marine employers with more than 10 employees have implemented all types of testing except random. Employers with 10 or fewer employees must comply by December 21, 1990.

Research and Special Programs Administration

Research and Special Programs Administration - 49 CFR Part 199 "Control of Drug Use in Natural Gas, Liquefied Natural Gas, and Hazardous Liquid Pipeline Operations": The Research and Special Programs Administration rule requires testing of certain employees of companies that operate 1.7 million miles of pipelines used to transport natural gas and hazardous liquids, and operators who produce and store liquefied natural gas. Operators must have testing programs for employees and contractors involved in the operation and maintenance of pipelines, and emergency response personnel. Pipeline operators are required to incorporate a drug program in their Operations and Maintenance or Personnel Health plans. Pipeline operators with more than 50 employees subject to drug testing under this part implemented drug testing programs April 20, 1990. Employers with 50 or fewer employees must comply by August 21, 1990.

Urban Mass Transportation Administration

Urban Mass Transportation Administration - 49 CFR Part 653 Control of Drug Use in Mass Transportation Operations":

The rule sets forth regulations to require recipients of Federal financial assistance from UMTA, and operators for such recipients, to have an anti-drug program for employees who perform sensitive safety functions. Sensitive safety functions generally include operating a vehicle, controlling dispatch or movement of a vehicle, maintaining a vehicle, maintaining equipment used in revenue services, and supervising any of the aforementioned functions. In January, 1990, the U.S. Court of Appeals for the District of Columbia Circuit, stated that the UMTA drug testing rule lacked statutory authority to mandate a nationwide drug testing program for its grantees. Implementation of the UMTA rule was therefore rescinded. Legislation has been introduced to provide the required statutory authority for UMTA to promulgate a drug testing rule.

SENATOR LAUTENBERG: What Department of Transportation agencies have access to the National Driver Register maintained by the National Highway Traffic Safety Administration? Do agencies outside the Department of Transportation like the Interstate Commerce Commission for insurance purposes, or the National Transportation Safety Board for accident investigation purposes, have access to the National Driver Register? Briefly describe the availability of the NDR to other agencies, other than NHTSA.

ANSWER: Federal agencies have access to the NDR under four separate provisions of the National Driver Register (NDR) Act of 1982 as follows:

I. All Federal agencies as employers or prospective employers of individuals employed or seeking employment as motor vehicle operators;

II. The National Transportation Safety Board and the Federal Highway Administrator for purposes of accident investigations conducted by the Board or the Office of Motor Carriers;

III. The Federal Aviation Administration in connection with the certification of airmen who apply for or currently hold an airman's medical certification;

IV. The Federal Railroad Administration in connection with individuals who are employed by or who are seeking employment with a railroad as an operator of a locomotive.

In terms of DOT agencies that have access to the NDR, any DOT agency that employs an individual as an operator of a motor vehicle may receive information from the NDR file. In addition, the Federal Highway Administration may receive NDR information for accident investigation purposes; and the FAA and the FRA may receive NDR information for the purpose of certifying or recertifying operators of air and rail transportation conveyances, respectively. The pending oil spill legislation would authorize Coast Guard use of the NDR for mariner licensing.

All other Federal agencies may receive NDR information only as employers or prospective employers of motor vehicle operators. The Interstate Commerce Commission is not authorized by law to have access to the NDR for insurance purposes.

ESSENTIAL AIR SERVICE

SENATOR LAUTENBERG: The Department's FY 1991 request of $23.6 million is a cut of $7.1 million from the 1990 level. How does the Department plan to achieve that funding level? Specifically, which points would be eliminated under your FY 1991 request? What criteria is the Department proposing for implementing such cuts? In listing the points likely to face elimination in FY 1991 under the Department's request, please provide the amount of subsidy each of those points receive in a full fiscal year, and the subsidy per passenger.

ANSWER: The Department continues to project that a FY 1991 budget of $25.5 million would be required to maintain the current service levels at all of the currently-eligible EAS points, i.e., assuming no further cuts. Our budget request of $23.6 million, therefore, would require a cut of $1.9 million which translates to the elimination of 8-12 points from the program, assuming that the cuts would be implemented on October 1, 1990. The Department will consider communities' relative isolation and their subsidy-per-passenger costs as the major eligibility criteria for continued service, as was done in FY 1990. The ultimate decision on how many points will need to be eliminated will be based on our actual appropriation and on how early in the fiscal year any cuts could be implemented.

The Department has suggested in its Report to Congress on Subsidized Air Service under the Essential Air Service Program--Ways to Reduce Annual Subsidy Expenditures, September 1989, and in its final rule dated December 19, 1989, setting forth new subsidy-reduction criteria that proximity of air service at an alternative airport, the volume of air service available at the alternative airport, and the compensation per passenger required to support air service at the EAS points represent reasonable criteria for effecting subsidy reductions. These criteria may be utilized to develop a list of comparative cost effectiveness. The below list is compiled from data current as of
May 16, 1990.

As a first cut, points at which subsidized air service exceeds $200 per passenger, based on existing rules, would be considered the least cost-effective. Beyond that, if a judgement were made that a list of least cost-effective rates of compensation should be limited to communities at which the compensation per passenger exceeds $75, a list of points receiving subsidized service and listed by degree of isolation (least isolation to greatest isolation; based on size of the alternative airport) would, based upon current information, appear as follows (least cost-effective listed first):

POINTS AT WHICH SUBSIDY EXCEEDS $200 PER PASSENGER

Lewistown, Montana
Jonesboro, Arkansas
Miles City, Montana

LEAST COST-EFFECTIVE BELOW $200 PER PASSENGER

Hot Springs, Arkansas
Gadsden, Alabama
Laconia, New Hampshire
Worthington, Minnesota
Enid, Oklahoma
Mt. Vernon, Illinois
Brownwood, Texas
Ottumwa, Iowa
Clarksburg/Fairmont, West Virginia
El Dorado/Camden, Arkansas
Hot Springs, Virginia
Yankton, South Dakota
Harrison, Arkansas

Hastings, Nebraska
Paris, Texas
Chadron, Nebraska
Havre, Montana
Lamar, Colorado
Moab, Utah
Elkins, West Virginia
Worland, Wyoming

In examining this list of points, it is important to be aware that the President's Budget for FY 1991 would presume real program cuts totaling $1.9 million. Therefore, it is the Department's position that 8-12 points may be vulnerable to program cuts in FY 1991 should that budget request be adopted.

SENATOR LAUTENBERG: What staffing requirement is necessary in FY 1991 under your EAS request?

ANSWER: Under our FY 1991 budget request of $23.6 million, our staffing requirements are 19 positions and 18 FTE's.

SENATOR LAUTENBERG: If the EAS program were maintained in FY 1991 at the current level, which includes no points eliminated from receiving service, how many positions, FTE's, and dollars would be required to administer the program and provide the subsidies?

ANSWER: If no additional points are eliminated from the program, the subsidy budget for FY 1991 would be $25.5 million. In order to administer the EAS program during FY 1991, again assuming no further cuts, we would require 24 positions, 23 FTE's, and $1,569 million. This is a significant decrease from our historical needs of 30 positions and 29 FTE's when the annual subsidy levels exceeded $30 million.

SENATOR LAUTENBERG: Please provide for the record a breakdown of the FY 1990 EAS service showing each subsidized point, miles between essential air service community and alternate service airport, average daily EAS subsidized enplanements at each community, total EAS subsidy, and subsidy per passenger.

ANSWER: The requested information is provided in the following tables. This list reflects rates effective as of April 27, 1990. Subsidy amounts are subject to change based on adjustments of temporary rates and hold-in subsidy rates.

SUBSIDIZED ESSENTIAL AIR SERVICE (EAS)

States/ Communities	Miles Btwn. EAS Point and Alt. Airport 1/	Avg. Daily Enpl's at EAS Point (1989)	Annual Subsidy 2/	Subsidy Per Psgr.
ALABAMA				
Anniston	62	34.5	- 3/	-
Gadsden	60	2.6	$183,137	$111.53
ARIZONA				
Kingman	103	8.2	$130,807	$25.37
Page	137	13.0	$177,433	$21.86

States/ Communities	Miles Btwn. EAS Point and Alt. Airport	Avg. Daily Enpl's at EAS Point (1989)	Annual Subsidy	Subsidy Per Psgr.
ARKANSAS				
El Dorado/Camden	84	7.5	$717,766	$153.21
Harrison	88	4.7	$544,432	$184.55
Hot Springs	57	4.4	$507,407	$184.31
Jonesboro	71	1.7	$260,273	$238.78 5/
CALIFORNIA				
Crescent City	80	8.3	$154,660	$29.69
Merced	60	22.9	$310,521	$21.66
COLORADO				
Alamosa	127	25.8	- 3/	-
Cortez	57	14.8	$138,210	$14.91
Lamar	114	3.0	$244,317	$129.41
GEORGIA				
Athens	82	63.6	- 3/	-
ILLINOIS				
Mattoon/Charleston	46	6.3	- 3/	-
Mt. Vernon	93	2.6	$307,772	$189.63
Quincy	100	13.2	- 3/	-
IOWA				
Ottumwa	92	3.9	$238,498	$97.03
KANSAS				
Dodge City	156	6.9	$244,317	$56.91
Garden City	209	10.1	$244,317	$38.64
Goodland	190	2.2	$244,317	$176.53
Great Bend	116	5.4	$244,317	$72.84
Hays	175	13.3	$244,317	$29.44
Liberal/Guymon	162	7.1	$244,317	$54.82
MAINE				
Bar Harbor	52	17.4	- 3/	-
Rockland	65	9.1	- 3/	-
MICHIGAN				
Iron Mountain	200	28.9	$95,485	$5.29
Ironwood/Ashland	103	8.1	$95,484	$18.74
Manistee/Ludington	120	9.1	$237,574	$41.85
Menominee/Marinette	60	6.7	$95,484	$22.70
MINNESOTA				
Fairmont	153	5.3	$241,791	$72.50
Mankato	75	4.9	$219,484	$71.45
Worthington	62	3.8	$219,483	$92.57
MISSOURI				
Ft. Leonard Wood	92	17.6	$168,983	$15.36
Kirksville	145	9.1	$235,637	$41.14

States/ Communities	Miles Btwn. EAS Point and Alt. Airport	Avg. Daily Enpl's at EAS Point (1989)	Annual Subsidy	Subsidy Per Psgr.
MISSISSIPPI				
Laurel/Hattiesburg	95	14.8	- 3/	-
MONTANA				
Glasgow	247	4.7	$259,558	$87.90
Glendive	192	2.5	$242,815	$156.35
Havre	113	2.4	$254,190	$168.23
Lewistown	108	1.3	$254,189	$305.15 5/
Miles City	146	1.9	$242,815	$200.84 5/
Sidney	183	6.5	$502,659	$122.63
Wolf Point	222	3.9	$259,558	$106.25
NEBRASKA				
Alliance	242	2.3	$198,605	$135.01
Chadron	104	2.1	$198,604	$151.72
Grand Island	98	15.0	$422,567	$44.90
Hastings	104	3.0	$343,899	$180.62
Kearney	130	7.3	$343,898	$74.86
McCook	259	3.0	$343,898	$181.38
North Platte	282	5.7	$287,594	$80.94
Scottsbluff	202	8.7	$287,594	$52.56
NEVADA				
Ely	236	6.3	$323,330	$81.59
NEW HAMPSHIRE				
Laconia	52	3.1	$272,384	$141.06
NEW MEXICO				
Alamogordo	92	8.7	$165,766	$30.27
Clovis	106	8.3	$133,651	$25.75
Hobbs	98	9.6	$85,690	$14.30
Sante Fe	59	17.1	$132,314	$12.36
Silver City	163	7.6	$169,390	$35.70
NEW YORK				
Massena	149	13.1	$239,610	$29.14
Ogdensburg	127	13.2	$239,610	$28.98
NORTH DAKOTA				
Devils Lake	90	7.5	$294,396	$62.42
Jamestown	97	13.9	$294,396	$33.87
Williston	130	16.2	$502,659	$49.64
NORTHERN MARIANAS				
Rota	N/A	4/	$430,410	
OKLAHOMA				
Enid	91	2.7	$178,235	$104.91
Ponca City	88	4.1	$178,235	$69.08
PENNSYLVANIA				
Oil City/Franklin	72	31.9	$128,504	$6.43

States/ Communities	Miles Btwn. EAS Point and Alt. Airport	Avg. Daily Enpl's at EAS Point (1989)	Annual Subsidy	Subsidy Per Psgr.
PUERTO RICO				
Ponce	80	14.6	$265,058	$29.05
SOUTH DAKOTA				
Brookings	57	6.3	$108,938	$27.44
Huron	121	11.1	$108,938	$15.63
Mitchell	68	3.3	$108,938	$51.97
Pierre	207	17.4	$371,165	$34.09
Yankton	96	1.7	$194,803	$182.40
TEXAS				
Brownwood	77	5.0	$285,898	$90.88
Paris	95	1.9	$228,799	$194.06
UTAH				
Cedar City	171	17.4	$167,489	$15.41
Moab	116	3.3	$172,930	$82.94
Vernal	171	8.0	$203,784	$40.89
VIRGINIA				
Danville	57	27.7	$217,856	$12.56
Hot Springs	95	2.0	$150,017	$120.21
WASHINGTON				
Ephrata/Moses Lake	83	12.7	$164,336	$20.74
WEST VIRGINIA				
Beckley	59	35.8	$55,123	$2.46
Clarksburg/Fairmont	107	6.1	$326,796	$85.82
Elkins	141	2.9	$323,952	$177.80
Morgantown	75	8.2	$326,795	$63.31
Princeton/Bluefield	96	37.2	$55,123	$2.37
WYOMING				
Laramie	50	22.9	- 3/	-
Worland	164	4.2	$352,655	$134.50

1/ The highway miles quoted in this table are in some instances different from those in earlier responses and are consistent with the Department's Final Rule on subsidy-eligibility criteria issued December 19, 1989. We have measured the distance from the center of the EAS community to the alternate airport. For these purposes, we have defined an alternate airport as one that enplanes at least 100 passengers per day. In addition, the distances are from the EAS community to the nearest unsubsidized air service, and those points can change over time as some points go off subsidy and new points require subsidy.

2/ Rates in effect as of April 27, 1990. Some of the rates are temporary rates and are subject to adjustment.

3/ No subsidy rate is currently in effect, but subsidy obligations are being accrued. Rates for these locations are expected to be set by the end of FY 1990.

4/ Data are not available.

5/ Effective January 1, 1990, communities at which subsidy exceeded $200 per passenger were made ineligible for further subsidization. Because of changes in subsidy rates or traffic levels, however, some communities that were less than $200 per passenger for past periods now require more than that amount per passenger in subsidy.

NOTE: The annual rates listed above represent only one piece of the FY 1990 budget requirements. In addition, there are requirements for lump sum payments for services already performed, past and future period rate adjustments, and carrier selections reestablishing air service at points temporarily without air service.

SENATOR LAUTENBERG: For the record please provide a listing of payments to air carriers who have participated in the essential air service program in fiscal years 1988, 1989, and 1990.

ANSWER: The requested information is provided in the following tables showing separately normal subsidy (i.e., prospective subsidies for carriers selected to provide essential air service), and hold-in subsidy i.e., subsidy to compensate carriers for losses sustained after filing notice to terminate service). Payments listed for fiscal year 1990 are through March 31, 1990.

SUMMARY OF NORMAL DISBURSEMENTS

Air Carriers	1988	1989	1990
Air L. A.	380,168	251,895	52,924
Air Midwest	1,501,243	2,104,213	947,932
Alaska Airlines	1,418,384	1,402,042	753,928
Aleutian Air	22,246	24,943	13,430
Alliance Airlines	508,309	0	0
Alpine Air	173,482	172,030	86,189
Atlantic Southeast	170,541	164,564	82,041
Bar Harbor	23,733	0	0
Bemidji	352,763	444,983	225,027
Big Sky	1,581,238	1,489,525	1,256,188
CCAir, Inc.	744,804	510,104	208,730
Chitina	100,633	102,656	6,584
Christman	0	0	118,752
Clinton Aero/Brockway Air	824,200	614,562	0
Colgan	216,714	0	0
Continental Air Lines	213,590	595,443	170,985
Crown	132,740	131,542	64,312
Direct Air	379,693	389,551	0
Exec Express	2,787,157	3,380,509	1,532,221
Executive Air Charter	264,996	259,978	130,715
40-Mile Air	32,561	38,032	18,756
Friendship Air Alaska	27,846	1,198	0
GCS Air Services	228,157	282,046	0
GP Express	2,302,662	2,289,345	1,180,797
Golden Pacific	567,487	94,344	0
Great Lakes	878,918	1,702,287	556,342
Gulkana Air Service	18,448	18,708	9,354

Air Carriers	1988	1989	1990
Harbor Air Service	53,407	53,332	11,721
Hermens/Markair Express	0	14,612	52,193
Horizon Airline, Inc.	325,792	263,044	102,037
Iowa Airways	250,301	482,040	116,572
Mesa	785,914	903,125	380,332
Mesaba	922,552	861,738	200,550
Metro Air Northeast	0	195,446	292,058
Mid Continent Airlines	919,784	751,000	115,687
MST Aviation	262,697	210,632	0
Peninsula	696,126	661,283	242,574
Precision Valley	190,777	93,600	0
Presidential	532,336	913,166	0
Prime Air	643,392	338,500	0
Propheter Aviation	451,029	444,149	161,325
Reeve Aleutian	620,067	0	0
Rocky Mountain	370,875	375,110	187,057
Ryan Air Service	0	2,992	2,448
Sky West	957,150	880,886	404,285
Valley Airlines	406,903	353,640	74,318
West Air	455,389	425,302	131,361
Yute Air Alaska	10,625	0	0
Total	24,707,829	24,688,097	9,889,725

SUMMARY OF HOLD-IN DISBURSEMENTS

Air Carriers	1988	1989	1990
Air Kentucky	226,515	183,244	0
Atlantis	379,824	155,780	0
Bering Air	11,412	8,855	0
Friendship Air Alaska	0	8,314	0
GCS Air Service	0	93,257	92,732
Great Lakes	120,187	199,323	
Iowa Airways	165,220	0	0
Mesa Air Shuttle	0	77,066	150,224
Mesaba	0	0	247,650
Reeve Aleutian	203,268	603,996	243,921
Simmons	772,970	413,812	15,550
Total	1,879,396	1,743,647	750,077

SENATOR LAUTENBERG: Please provide for the record an estimate of the annual cost of higher service levels which were authorized under Section 419 of Public Law 100-223.

ANSWER: We estimate that $11 million would be required to upgrade service at all of the current EAS points to the levels required by Public Law 100-223, i.e., a maximum of one intermediate stop to the hub, 15-seat or larger aircraft for most points, pressurized aircraft in many cases, etc. Public Law 100-223 also included provisions whereby currently eligible points could receive an "enhanced" service level and new points could be added to the program, in both cases if the community, state, or other third party shared the subsidy burden with the Federal government. It is very difficult to quantify a budget for these provisions since it would be driven almost entirely by the number of communities applying for new or enhanced service.

The President's Budget did not include funds for these enhancements. In view of overall budget constraints, and cutbacks in basic service, expansion or enhancements are not justified.

SENATOR LAUTENBERG: Under the EAS reauthorization, new points were allowed to join the program if they met certain criteria. What new points have applied to the Department of Transportation to be included in the essential air service program, and what estimates does the Department have for potential other new sites that may apply?

ANSWER: Since the EAS law was changed in late 1987, we have received initial inquiries about the procedures for adding new points to the subsidy program from persons representing the following communities:

Del Rio, TX
Ruidoso, NM
Pine Bluff, AR
Wheeling, WV
Ocala, FL
Glen, TX
Glens Falls, NY

We have received more extensive requests for information and expressions of serious interest from the following communities:

Dickinson, ND
Fergus Falls, MN
Manteo, NC

We issued a rule on December 19, 1989, for determining which communities would lose their subsidized air service. A part of the rule specifies that we will not process proposals for adding any new points to the EAS subsidy program in view of the limited funding. We have no way of predicting which communities would participate in the program since a community, state, or some other party is required to share the subsidy cost for EAS to newly eligible communities. We have not proposed to fund these new points in FY 1991, consistent with our position that the program should be phased out.

SENATOR LAUTENBERG: What are the federal costs associated with these new points?

ANSWER: The federal share of the subsidy costs for newly eligible points would be either 50 percent or 75 percent. The higher percentage share would be for service at new communities that meet specific qualifications set forth in the statute. We have no way of knowing the actual number of communities that would be able to generate commitments for the non-federal share of the subsidy. We would expect that the subsidy cost (including federal and local payment) for a new point would tend to be higher than the average subsidy per point under the current program, since new points do not have a history of air service and significant market development would be required. We estimate that the federal share of the subsidy could be in the range of $125,000 to $300,000 per year for a new point.

SENATOR LAUTENBERG: Which carriers which serve essential air service points have either dropped out of the EAS program or gone bankrupt in the past two years? Please list those communities affected by such bankruptcies and/or service terminations.

ANSWER: Two carriers have filed under Chapter 11 of the Bankruptcy Code with no effect on the communities they serve (i.e., they are still providing service during bankruptcy proceedings). They are Big Sky Transportation Co., which serves Havre, Lewistown, Glendive, Miles City, Glasgow, Wolf Point, and Sidney, Montana, and Williston, North Dakota; and Exec Express II, which serves El Dorado/Camden, Harrison, Hot Springs, and Jonesboro, Arkansas, Enid and Ponca City, Oklahoma, and Brownwood and Paris, Texas.

Seven carriers have gone bankrupt or ceased operations with a loss of service resulting at the communities they served. They are Golden Pacific Airlines, which served Kingman and Winslow, Arizona; Presidential Airways, which served Elkins, Clarksburg/Fairmont, and Morgantown, West Virginia, and Hot Springs, Virginia; Propheter Aviation, which served Clinton, Iowa, and Sterling/Rock Falls, Illinois; Prime Air, which served Mount Vernon, Illinois, and Clarksville, Tennessee; MST Aviation, which served Beloit/Janesville, Wisconsin; Precision Valley Aviation, which served Montpelier/Barre, Vermont; and Midcontinent Airlines, which served Kirksville, Missouri, Columbus and Norfolk, Nebraska, and Yankton, South Dakota. A number of these affected communities have since had their service restored.

Four carriers dropped out of the program following the Department's December 1989 rulemaking on subsidy eligibility. They are Direct Air, which served Kokomo, Indiana; GCS Air Service, which served Mansfield, Ohio; Air LA, which served Blythe, California; and Iowa Airways, which served Elkhart, Indiana, and Benton Harbor, Michigan. These communities were deemed ineligible for continued subsidy.

One carrier, Air Kentucky, dropped out of the EAS program because the Department determined that the essential air service requirements of the communities it served, Owensboro, Kentucky, and Terre Haute, Indiana, were being met without subsidy support by other carriers.

GENERAL SERVICES ADMINISTRATION RENT CHARGES

SENATOR LAUTENBERG: For the record, please provide the 1989 actual, 1990 estimated, and 1991 estimated GSA rental payments. Please list these rental payments by mode and by account. In addition, include information on the total square footage involved by mode and account.

ANSWER: The requested information follows:

DEPARTMENT OF TRANSPORTATION
GSA RENTAL PAYMENTS

	FY 1989 Actual		FY 1990 Estimated		FY 1991 Estimated	
MODE/ACCOUNT	$(000)	SQ. FT. (000)	$(000)	SQ. FT. (000)	$(000)	SQ. FT. (000)
FHWA Limitation on Gen. Oper. Exp.	11,501	857	13,739	866	14,234	866
Motor Carrier Safety	2		288	25	295	25
Subtotal, FHWA	11,503	857	14,027	891	14,529	891

NHTSA	Operations and Research (GF)	2,268	99	2,759	99	2,870	99
	Operations and Research (TF)	1,046	46	1,194	46	1,234	46
	Hiway Traf. Sfty. Gr.(Trns. to O&R)	175	8	175	8	175	8
	Subtotal, NHTSA	3,489	153	4,128	153	4,279	153
FRA	Office of the Administrator	1,181	70	1,415	70	1,415	70
	Railroad Safety *	1,176	64	1,278	68	1,504	70
	Railroad Research and Devel. *	76	4	82	4	87	4
	Subtotal, FRA	2,433	138	2,775	142	3,006	144
UMTA	Administrative Expenses	2,447	111	2,986	110	3,062	110
FAA	Operations *	29,939	2,487	38,011	2,717	45,406	3,133
USCG	Operating Expenses	23,019	1,707	28,746	1,768	31,353	1,856
	Reserve Training	630	150	650	150	680	150
	Research, Devel., Test, & Eval.	444	80	460	80	518	80
	Subtotal, USCG	24,093	1,937	29,856	1,998	32,551	2,086
SLSDC	Operations and Maintenance *	132	6	157	6	163	6
OIG	Salaries and Expenses	1,675	91	2,000	97	2,112	97
RSPA	Research and Special Programs	799	39	1,079	39	1,214	39
	Pipeline Safety	296	15	419	15	433	15
	Subtotal, RSPA	1,095	54	1,498	54	1,647	54
OST	Salaries and Expenses	5,172	232	6,065	188	6,352	188
	Working Capital Fund	5,157	243	6,093	256	6,337	256
	Commission on Av. Sec. & Terrorism	---	---	72	4	---	---
	Subtotal, OST	10,329	475	12,230	448	12,689	444
DOT TOTAL (Excl. Reimbursements, MARAD, and ICC)		87,135	6,309	107,668	6,615	119,444	7,118

* Corrects amounts as shown in President's Budget

SENATOR LAUTENBERG: The Administration recently sent up a budget amendment to Congress in support of new General Services Administration buildings. Does this affect the original SLUC request?

ANSWER: On March 29, 1990, President Bush sent a budget amendment to Congress asking for additional 1991 appropriations of $1.365 billion for GSA's Federal Buildings Fund and advance appropriations of $703.7 million in FY 1992 and $317.6 million in FY 1993.

The funds are to implement the recommendations of a joint GSA/OMB study of future Federal office space requirements -- 21 new buildings including the new DOT building. The budget amendment includes $596 million specifically earmarked for the DOT building: $50 million in FY 1991 for land acquisition and $546 million to be available in FY 1992 for construction. The amendment also includes $28 million to cover design and management and inspection of construction costs for the building, but does not identify it as attributable to DOT. The budget amendment reflects the Administration's view that new building construction should be financed up front and not by lease cost financing.

The DOT component includes funding in FY 1991 for the acquisition of land and additional air rights adjacent to the Union Station site owned by the Union Station Redevelopment Corporation. This will be used as the site for construction of a new DOT consolidated headquarters building.

The amendment does not affect the original SLUC request for our existing headquarters space where DOT will remain until the new building is completed.

SENATOR LAUTENBERG: It was recently reported that Richard Austin, Acting Administrator of the General Services Administration, stated that a consolidation of DOT employees into a new downtown Washington building near Union Station would save DOT approximately $100 million in lease payments over a 30-year period. Please provide an analysis of those estimated savings.

ANSWER: The General Services Administration in conjunction with DOT developed an analysis of the project costs for constructing a DOT consolidated headquarters building versus leasing comparable space in downtown Washington, DC. That analysis, which is consistent with OMB Circular A-104, Evaluating Leases of Capital Assets, concludes that on a present value basis assuming an eight percent discount rate and a 30-year lease period, new construction including all costs of ownership and operation, is approximately $350,000,000 less expensive than leasing. The final analysis for the above savings will be included in GSA's prospectus for the project.

SENATOR LAUTENBERG: Please describe the status of the Department's efforts to build a new building that would consolidate all DOT employees into one facility. What would be the total square footage involved, and what is the approximate cost of that new building? Briefly describe how the Department of Transportation (DOT) would, through the General Services Administration (GSA), finance the construction of this new building. Include budget requested amounts for the next five fiscal years.

ANSWER: All aspects of the planning phase for the Department of Transportation (DOT) consolidated headquarters building have been started. A program of space and technical requirements is being developed by DOT and GSA to describe the Department's need. A site feasibility study has been done to determine the optimum site configuration at the Union Station site and an environmental impact statement has begun.

The DOT headquarters building is planned to have 2,405,100 of occupiable square feet and parking for 1500 cars. The building prospectus, including total cost requirements, is being developed within the Administration.

The DOT headquarters building will be a GSA Federal office building financed by direct appropriations. The President's budget amendment submitted March 29, 1990, included: $50 million for land acquisition (FY 91); $546 million for construction (FY 92); $28 million for design, and management and inspection of construction (FY 92) as part of the line item for design appearing at the bottom of page A-1044 of the FY 91 President's budget. Any remaining costs beyond the budget amendment will need to be addressed before construction begins in FY 92.

USER FEES

SENATOR LAUTENBERG: The Administration is requesting a number of new user fees for the Department of Transportation. For each of the agencies involved — Federal Railroad Administration, Coast Guard, and Federal Aviation Administration — please provide: the 1991 estimated revenues generated, the tax object (who would pay the tax); what specifically is taxed; what the current law tax rates are; and what the tax rates would be under the proposed change. Include the amount of funding generated under the existing law, and the amount of funding that would be generated under the proposed user fee increase.

ANSWER: DOT is proposing to establish or increase user fees in several areas, resulting in increased FY 1991 receipts as follows:

FAA (+$623 million), by raising the passenger ticket fee from 8 percent to 10 percent, increasing the freight way bill fee from 5 percent to 6 percent, and the fuel fee from 12 cents to 15 cents per gallon (14 cents to 18 cents for jets). Existing law receipts would total $4.244 billion).

Coast Guard (+$200 million), by charging fees to owners of commercial and recreational boaters.

Federal Railroad Administration (+$20 million), by charging railroads for safety inspections and other activities.

These user fee proposals reflect the principle that users — not general taxpayers — should pay for services received from the Federal government. While our proposals would head in this direction, none of them would fully cover the cost of services performed in FY 1991 in these areas. A legislative proposal was transmitted to the Congress on March 19, 1990.

BENEFITS AND PERSONNEL COMPENSATION COSTS

SENATOR LAUTENBERG: For the record, provided by each mode and account, the total amount of benefits and personnel compensation (separately) paid in fiscal years 1989, estimated for 1990, and projected for 1991. In addition, provide the benefits per personnel cost ratio for each of those three fiscal years by agency by account.

ANSWER: In the context of the following tables, personnel compensation excludes "Other Personnel Compensation" (object class 11.5) and "Special Personal Services Payments" (object class 11.8). These costs include such things as overtime/holiday pay and post differentials and do not affect the computation of benefits. Personnel benefits excludes "Benefits for Former Personnel" (object class 13.0).

In comparing the various ratios of benefits to personnel compensation, it is important to keep in mind that these ratios reflect the type of workforce, which differs substantially between the modes. For example, St. Lawrence Seaway has a union contract that provides for a major increase in health benefits coverage in lieu of a pay raise. The contract applies to approximately one-half of SLSDC employees and covers the FY 1987-1990 time period. Other differences can be explained by such factors as the incidence of FERS participation (e.g., motor carrier safety which has a high turnover level and FAA (Ops & F&E) which have experienced a larger number of recent FERS hires, most of whom qualify for special class FERS benefits. Another factor that contributes to high benefit ratios in FAA (and Coast Guard) is the cost of permanent change of station moves.

DEPARTMENT OF TRANSPORTATION
CIVILIAN PERSONNEL COMPENSATION AND BENEFITS*
(DOLLARS IN THOUSANDS)

	PERSONNEL COMPENSATION			PERSONNEL BENEFITS			BENEFITS/PERS.COMP.		
ADMINISTRATION/ACCOUNT	FY1989	FY1990	FY1991	FY1989	FY1990	FY1991	FY1989	FY1990	FY1991
FEDERAL HIGHWAY ADMINISTRATION									
Motor Carrier Safety..............	13,741	16,401	20,172	3,289	3,844	5,585	23.9%	23.4%	27.7%
Federal-aid Highways..............	135,378	140,670	147,349	23,540	25,246	26,347	17.4%	17.9%	17.9%
Miscellaneous Trust Funds.........	804	1,555	401	145	280	72	18.0%	18.0%	18.0%
Subtotal.........................	149,923	158,626	167,922	26,974	29,370	32,004	18.0%	18.5%	19.1%
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION									
Operations and Research...........	27,274	28,261	30,448	3,827	3,626	3,899	14.0%	12.8%	12.8%
FEDERAL RAILROAD ADMINISTRATION									
Office of the Administrator.......	7,951	7,907	8,708	1,100	1,460	1,693	13.8%	18.5%	19.4%
Railroad Safety...................	16,198	18,884	21,139	2,786	3,234	4,029	17.2%	17.1%	19.1%
Railroad Research and Development.	758	840	960	118	100	120	15.6%	11.9%	12.5%
Subtotal.........................	24,907	27,631	30,807	4,004	4,794	5,842	16.1%	17.4%	19.0%
URBAN MASS TRANSPORTATION ADMINISTRATION....................	18,844	19,732	21,366	2,609	2,770	3,076	13.8%	14.0%	14.4%

*Excludes Maritime Administration and reimbursable personnel costs.

DEPARTMENT OF TRANSPORTATION
CIVILIAN PERSONNEL COMPENSATION AND BENEFITS*
(DOLLARS IN THOUSANDS)

	PERSONNEL COMPENSATION			PERSONNEL BENEFITS			BENEFITS/PERS.COMP.		
ADMINISTRATION/ACCOUNT	FY1989	FY1990	FY1991	FY1989	FY1990	FY1991	FY1989	FY1990	FY1991
FEDERAL AVIATION ADMINISTRATION									
Operations	1,846,860	2,009,260	2,165,271	459,516	523,557	572,354	24.9%	26.1%	26.4%
Aviation Insurance Revolving Fund.	92	94	95	10	11	11	10.9%	11.7%	11.6%
Facilities and Equipment	45,910	42,447	53,402	9,518	8,787	11,038	20.7%	20.7%	20.7%
Research, Engineering and Development	29,019	30,113	31,550	4,266	4,415	4,634	14.7%	14.7%	14.7%
Subtotal	1,921,881	2,081,914	2,250,318	473,310	536,770	588,037	24.6%	25.8%	26.1%
UNITED STATES COAST GUARD									
Operating Expenses	137,474	138,421	143,649	26,045	26,224	27,195	18.9%	18.9%	18.9%
Acquisition, Construction, and Improvements	7,170	7,295	8,667	1,192	1,279	1,520	16.6%	17.5%	17.5%
Reserve Training	1,676	1,810	1,910	355	360	370	21.2%	19.9%	19.4%
Research, Development, Test, and Evaluation	2,673	2,805	2,997	414	435	465	15.5%	15.5%	15.5%
Coast Guard Yard Fund	15,388	15,362	16,967	2,878	2,133	2,475	18.7%	13.9%	14.6%
Subtotal	164,381	165,693	174,190	30,884	30,431	32,025	18.8%	18.4%	18.4%
ST LAWRENCE SEAWAY DEVELOPMENT CORPORATION	4,797	4,920	5,189	1,356	1,440	1,662	28.3%	29.3%	32.0%
OFFICE OF THE INSPECTOR GENERAL	18,174	19,214	19,928	3,081	3,248	3,500	17.0%	16.9%	17.6%

*Excludes Maritime Administration and reimbursable personnel costs.

DEPARTMENT OF TRANSPORTATION
CIVILIAN PERSONNEL COMPENSATION AND BENEFITS*
(DOLLARS IN THOUSANDS)

ADMINISTRATION/ACCOUNT	PERSONNEL COMPENSATION			PERSONNEL BENEFITS			BENEFITS/PERS.COMP.		
	FY1989	FY1990	FY1991	FY1989	FY1990	FY1991	FY1989	FY1990	FY1991
RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION									
Research and Special Programs	6,613	7,107	8,057	1,106	933	1,076	16.7%	13.1%	13.4%
Working Capital Fund	23,537	24,369	25,072	3,885	4,223	4,616	16.5%	17.3%	18.4%
Pipeline Safety	2,055	2,045	2,458	383	271	318	18.6%	13.3%	12.9%
Subtotal	32,205	33,521	35,587	5,374	5,427	6,010	16.7%	16.2%	16.9%
OFFICE OF THE SECRETARY									
Salaries and Expenses	30,338	31,896	32,347	4,284	4,628	4,706	14.1%	14.5%	14.5%
Operations and Research, OCST	0	0	1,130	0	0	187	0	0	16.5%
Activities Transferred from Salaries and Expenses, Interstate Commerce Commission	0	0	10,650	0	0	1,611	0	0	15.1%
Transportation, Planning, Research, and Development	1,999	1,947	1,452	238	287	197	11.9%	14.7%	13.6%
Commission on Aviation Security and Terrorism	0	129	0	0	15	0	0	11.6%	0
Working Capital Fund	10,289	11,959	12,732	1,500	1,706	1,801	14.6%	14.3%	14.1%
Subtotal	42,626	45,931	58,311	6,022	6,636	8,502	14.1%	14.4%	14.6%
TOTAL	2,405,012	2,585,443	2,794,066	557,441	624,512	684,557	23.2%	24.2%	24.5%

*Excludes Maritime Administration and reimbursable personnel costs.

DEPARTMENT OF TRANSPORTATION
MILITARY PERSONNEL COMPENSATION AND BENEFITS
(DOLLARS IN THOUSANDS)

	PERSONNEL COMPENSATION			PERSONNEL BENEFITS			BENEFITS/PERS.COMP.		
ADMINISTRATION/ACCOUNT	FY1989	FY1990	FY1991	FY1989	FY1990	FY1991	FY1989	FY1990	FY1991
UNITED STATES COAST GUARD									
Operating Expenses................	821,524	829,620	862,080	89,953	90,840	93,996	10.9%	10.9%	10.9%
Acquisition, Construction, and Improvements.................	10,379	10,712	12,726	902	965	1,146	8.7%	9.0%	9.0%
Reserve Training..................	49,190	51,000	55,810	2,615	4,900	5,200	5.3%	9.6%	9.3%
Research, Development, Test, and Evaluation...................	1,625	1,978	2,138	141	178	187	8.7%	9.0%	8.7%
Coast Guard Yard Fund.............	483	721	797	27	65	72	5.6%	9.0%	9.0%
Subtotal........................	883,201	894,031	933,551	93,638	96,948	100,601	10.6%	10.8%	10.8%

*Excludes reimbursable personnel costs.

SENATOR LAUTENBERG: For the record, please provide the major factors that contribute to the benefits costs. By agency and account provide the cost of the Federal Employees Retirement System benefits.

ANSWER: Major factors that contribute to the benefits cost in the Department of Transportation are Employers' contributions as follows:

FERS Special (Law Enforcement).	25.4% of FERS employees salaries
FERS Basic Retirement..........	13% of FERS employees salaries.
CSR for Law Enforcement Pers...	7.5% of CSR employees salaries.
Civil Service Retirement.......	7% of CSR employees salaries.
FERS FICA......................	6.2% of FERS employees salaries up to $48,000.
Medicare.......................	1.45% of salaries under Civil Service up to $48,000.
FERS Thrift (Basic)............	1% of FERS employees salaries
FERS Thrift (Optional).........	First 3% of employee contribution, gov't matches 3%. Next 2% of employee contribution, gov't matches .5%. Next 5% of employee contribution, no gov't match.
Health Insurance...............	Average 5 to 6% of employees salaries.
Life Insurance.................	Average .2 to .3% percent employees salaries.
Permanent Change of Station....	As required.

The cost of FERS by agency/account follows:

($ in thousands)

	1989 actual	1990 estimated	1991 estimated
FHWA			
Motor Carrier Safety	3,421	4,070	4,311
Federal-aid Highways(GOE)	1,105	1,440	1,596
Sub-total	4,526	5,510	5,907
NHTSA			
Operations & Research	651	730	818
FRA			
Office of the Administrator	256	348	520
Railroad Safety	681	1,169	1,797
Railroad Research & Development	3	22	23
Sub-total	940	1,539	2,340
UMTA			
Administrative Expenses	263	298	351
FAA			
Operations	89,330	116,000	134,000
Aviation Ins. Revolving Fund	1,989	2,487	3,073
Facilities & Equipment	556	684	824
Sub-total	91,875	119,171	137,897
USCG			
Operating Expenses	4,203	5,668	6,043
Acquisition, Const. & Improve.	93	96	133
Reserve Training	73	100	141
Research, Devel., Test, & Eval.	258	293	355
Coast Guard Yard Fund	629	862	892
Sub-total	5,256	7,019	7,564
SLSDC			
Operations & Maintenance	358	418	492

OIG			
Salaries and Expenses	1,214	1,470	1,561
RSPA			
Research & Spec. Programs	208	716	730
Pipeline Safety	206	250	280
Sub-total	414	966	1,010
OST			
Salaries and Expenses	531	741	733
Trans. Planning, Res., & Devel.	17	29	20
Operations & Research (OCST)	0	0	19
Working Capital Fund	171	241	250
Sub-total	719	1,011	1,022
TOTAL DOT	105,565	137,402	158,144

SENATOR LAUTENBERG: For the record, provide the percentage of employees by agency and account that are enrolled in the FERS benefits program.

ANSWER: Currently, the percentage of FERS employees by agency/account is as follows:

FHWA	
Motor Carrier Safety	51.0%
Federal-aid Highways(GOE)	22.0%
NHTSA	
Operations & Research	27.5%
FRA	
Office of the Administrator	21.8%
Railroad Safety	11.5%
Railroad Research & Development	6.7%
UMTA	
Administrative Expenses	12.5%
FAA	
Operations	31.8%
Aviation Ins. Revolving Fund	39.0%
Facilities & Equipment	21.4%
USCG	
Operating Expenses	38.7%
Acquisition, Const. & Improve.	27.5%
Reserve Training	39.0%
Research, Devel., Test, & Eval.	30.3%
Coast Guard Yard Fund	43.0%
SLSDC	
Operations & Maintenance	38.0%
OIG	
Salaries and Expenses	37.0%
RSPA	
Research & Spec. Programs	33.0%
Pipeline Safety	38.0%
OST	
Salaries and Expenses	19.2%
Trans. Planning, Res., & Devel.	18.2%
Working Capital Fund	17.4%

DEPARTMENT OF TRANSPORTATION STAFF BY OFFICE

SENATOR LAUTENBERG: Please provide for the record a staffing breakdown of the requested and Congressionally allocated positions, including FTEs, for each of the DOT appropriation accounts for fiscal years 1989, 1990, and requested for 1991.

ANSWER: The requested information follows:

DEPARTMENT OF TRANSPORTATION
AUTHORIZED POSITIONS FY 1989 - 1991

	FY 1989		FY 1990		FY 1991
Administration/Appropriation	Request	Approved	Request	Approved	Request
Federal Highway Administration					
Motor Carrier Safety	448	448	633	633	633
Limitation on Gen. Oper. Exp.	2,621	2,621	2,621	2,621	2,621
Federal-Aid Highways	264	232	239	239	239
Allocations/Reimbursements	145	196	189	189	189
Misc. Trust Funds	15	15	15	15	15
subtotal, FHWA	3,493	3,512	3,697	3,697	3,697
Nat'l. Highway Traffic Safety Admin.					
Operations & Research	651	652	656	656	665
Federal Railroad Administration					
Office of the Administrator	190	197	196	196	192
Reimbursements	--	--	--	--	3
Railroad Safety	447	446	486	486	498
Railroad Research & Development	15	15	15	15	16
subtotal	652	658	697	697	709
Urban Mass Transportation Admin.					
Administrative Expenses	400	425	400	400	410
Federal Aviation Administration					
Operations	47,832	47,954	50,414	50,196	51,162
Reimbursements	384	384	500	500	500
Headquarters Administration	530	520	Included under Operations		
Reimbursements	43	43	Included under Operations		
Aviation Insurance Revolving Fund	2	2	2	2	2
Facilities & Equipment	1,162	1,162	1,368	1,368	1,743
Reimbursements	53	55	53	53	55
Research Engineering & Development	645	645	645	645	668
Reimbursements	8	6	6	6	6
subtotal, FAA	50,659	50,771	52,988	52,770	54,136

DEPARTMENT OF TRANSPORTATION
AUTHORIZED POSITIONS FY 1989 - 1991 (continued)

Administration/Appropriation	FY 1989 Request	FY 1989 Approved	FY 1990 Request	FY 1990 Approved	FY 1991 Request
United States Coast Guard					
Operating Expenses	4,576	4,576	4,632	4,632	4,777
Reimbursements	29	29	29	17	17
Military	36,771	37,085	37,048	37,129	37,548
Reimbursements	299	99	99	131	131
Acquisition, Constr. & Impr.	224	224	230	230	238
Military	330	330	387	387	403
Reserve Training	112	112	112	112	112
Military	599	599	599	599	599
Res. Devel. Test & Evaluation	71	71	71	71	78
Military	42	42	42	42	48
Yard Fund	654	654	654	654	654
Military	24	24	24	24	24
subtotal, USCG	43,731	43,845	43,927	44,028	44,629
Civilian	5,666	5,666	5,728	5,716	5,876
Military	38,065	38,179	38,199	38,312	38,753
St. Lawrence Seaway Devel. Corp.					
SLSDC Fund	184	184	179	179	179
Office of the Inspector General					
Salaries & Expenses	467	467	470	470	470
Research & Special Programs Admin.					
Research & Special Programs	155	156	162	163	171
Pipeline Safety	48	48	51	51	60
Transportation Systems Center	520	520	518	518	515
subtotal, RSPA	723	724	731	732	746
Office of the Secretary					
Salaries & Expenses	687	663	682	682	653
Reimbursements	19	19	14	21	22
Trans. Plng. Res. & Devel.	35	33	33	33	23
Operations & Research, OCST	Included under Salaries & Expenses and TPR&D				26
Working Capital Fund	309	311	311	311	319
subtotal, OST	1,050	1,026	1,020	1,047	1,043
TOTAL, Department of Transportation (Excluding Maritime Administration)	102,010	102,264	104,765	104,676	106,684
Civilian	63,945	64,085	66,566	66,364	67,931
Military	38,065	38,179	38,199	38,312	38,753

DEPARTMENT OF TRANSPORTATION
FULL TIME EQUIVALENT FY 1989 - 1991

Administration/Appropriation	FY 1989 Request	FY 1989 Approved	FY 1990 Request	FY 1990 Approved	FY 1991 Request
Federal Highway Administration					
Motor Carrier Safety	450	450	543	510	602
Limitation on Gen. Oper. Exp.	2,675	2,675	2,675	2,675	2,675
Federal-Aid Highways	481	501	481	501	501
Misc. Trust Funds	16	16	16	16	16
subtotal, FHWA	3,622	3,642	3,715	3,702	3,794
Nat'l. Highway Traffic Safety Admin.					
Operations & Research	654	655	659	659	666
Federal Railroad Administration					
Office of the Administrator	176	183	182	182	185
Railroad Safety	439	411	433	427	474
Railroad Research & Development	15	15	15	15	16
subtotal	630	609	630	624	675
Urban Mass Transportation Admin.					
Administrative Expenses	415	431	415	415	425
Federal Aviation Administration					
Operations	45,184	45,272	47,521	49,025	50,493
Headquarters Administration	550	520	Included under Operations		
Aviation Insurance Revolving Fund	2	2	2	2	2
Facilities & Equipment	1,266	1,323	1,379	1,379	1,569
Research Engineering & Development	653	646	646	679	704
subtotal, FAA	47,655	47,763	49,548	51,085	52,768
United States Coast Guard					
Operating Expenses	4,494	4,492	4,554	4,543	4,657
Military	37,116	37,230	37,147	37,260	37,355
Acquisition, Constr. & Impr.	224	224	227	227	231
Military	330	330	359	359	395
Reserve Training	104	106	106	106	106
Military	599	599	599	599	599
Res. Devel. Test & Evaluation	70	70	70	70	76
Military	42	42	42	42	48
Yard Fund	632	632	632	632	632
Military	24	24	24	24	24
subtotal, USCG	43,635	43,749	43,760	43,862	44,123
Civilian	5,524	5,524	5,589	5,578	5,702
Military	38,111	38,225	38,171	38,284	38,421

DEPARTMENT OF TRANSPORTATION
FULL TIME EQUIVALENT FY 1989 - 1991 (continued)

Administration/Appropriation	FY 1989 Request	FY 1989 Approved	FY 1990 Request	FY 1990 Approved	FY 1991 Request
St. Lawrence Seaway Devel. Corp.					
SLSDC Fund	184	184	179	179	179
Office of the Inspector General					
Salaries & Expenses	459	459	462	462	462
Research & Special Programs Admin.					
Research & Special Programs	153	154	157	158	164
Pipeline Safety	48	48	50	50	55
Transportation Systems Center	512	512	510	510	504
subtotal, RSPA	713	714	717	718	723
Office of the Secretary					
Salaries & Expenses	707	665	667	672	651
Trans. Plng. Res. & Devel.	35	32	32	32	22
Operations & Research, OCST	--	--	--	--	24
Working Capital Fund	308	317	317	317	325
subtotal, OST	1,050	1,014	1,016	1,021	1,022
TOTAL, Department of Transportation (Excluding Maritime Administration)	99,017	99,220	101,101	102,727	104,837
Civilian	60,906	60,995	62,930	64,443	66,416
Military	38,111	38,225	38,171	38,284	38,421

SENATOR LAUTENBERG: Does the Department currently employ, or have plans to employ, any Secretarial regional representatives? If so, where would they be employed, and out of what office would they be funded?

ANSWER: DOT does not currently employ any Secretarial regional representatives nor does the Secretary plan to appoint any regional representatives in the foreseeable future.

SENATOR LAUTENBERG: Provide for the record a breakdown of all Office of the Secretary SES bonus awards made in fiscal years 1988, 1989, and 1990 to date, and the amount requested and budgeted for fiscal year 1991. For fiscal years 1988 through 1990, show the name, title and amount of award.

ANSWER: SES bonus awards are not specifically budgeted in OST. The funds listed below were obligated in the Salaries and Expenses and Working Capital Fund accounts. For the past three years, actual payout of these awards have amounted to $127 thousand in 1988, $154 thousand in 1989, and $134 thousand in 1990. An $150 thousand estimate is projected for FY 1991.

SENIOR EXECUTIVE BONUS RECIPIENTS
FISCAL YEARS 1988-1990

OFFICE OF THE SECRETARY

Award Recipient	1988	1989	1990
Melissa Allen Deputy Assistant Secretary for Administration	14,680	13,150	4,550
Joseph Canny Director, Office of Transportation Regulatory Affairs	4,125	4,680	6,650
John Coleman Director, Office of Aviation Analysis	4,250	9,225	4,550
Katherine E. Collins Director of Budget			13,300
Warren Dean Assistant General Counsel for International Law (Has left the Department)	4,125		
Neil Eisner Assistant General Counsel for Regulations and Enforcement		8,975	4,410
William FitzGerald Deputy Assistant Secretary for Budget and Programs (Retired)	13,600	13,150	
Paul Gretch Director, Office of International Aviation	4,125	3,900	4,410
Thomas Herlihy Assistant General Counsel for Legislation	3,900	4,410	
Donald Horn Assistant General Counsel for International Law			4,410
William Hudson Departmental Director of Civil Rights	9,825	6,275	6,860
Ronald Keefer Director, Office of Administrative Services and Property Management		3,900	

Award Recipient	1988	1989	1990
Rosalind Knapp Deputy General Counsel	13,600	15,100	
Arnold Levine Director, Office of International Transportation and Trade			4,410
Marilyn S. Marton Director, Office of Acquisition and Grant Management	5,900	3,825	4,410
George McDonald Director, Office of Programs and Evaluation	8,425	8,425	9,520
Carolina Mederos Deputy Assistant Secretary for Safety	4,125	8,325	
Patrick Murphy Deputy Assistant Secretary for Policy and Program Development	4,125	13,150	4,550
Angelo Picillo Deputy Director, Office of Administrative Services and Property Management		3,900	
Samuel Podberesky Assistant General Counsel for Aviation Enforcement and Proceedings	14,680	8,975	4,410
Jon Seymour Assistant Secretary for Administration	13,975	13,500	16,140
Joyce Shelton Director, Office of Financial Management	3,950	3,900	
Glenda Tate Director, Office of Management Planning		3,825	6,650
E. Kimmel Taylor Director, Office of DAFIS Development and Implementation			4,410
Donald Trilling Deputy Director, Office of Transportation Regulatory Affairs		3,900	6,650

Award Recipient	1988	1989	1990
Robert J. Woods Director, Office of Information Resource Management			4,410
Diana Zeidel Director of Personnel	3,950		15,280

SENATOR LAUTENBERG: Please provide for the record a listing of all Presidential, non-career SES, Schedule C, or other temporary political appointees currently on board in OST and the other modal agencies. Please show title, salary, office, and location.

ANSWER: A listing of all Presidential, non-career SES, Schedule C, or other temporary political appointees currently on board (as of March 31, 1990) in OST and the other modal agencies (except MarAd) follows:

DEPARTMENT OF TRANSPORTATION
PRESIDENTIAL (PAS), NONCAREER SENIOR EXECUTIVE SERVICE (NC), AND SCHEDULE C (C) APPOINTEES
FY 1990

(all located in Washington, D.C. unless otherwise indicated)

As of March 31, 1990

OFFICE OF THE SECRETARY

Title	Salary
The Secretary	$107,300
Chief of Staff	$ 83,600
Counselor to the Secretary	$ 83,600
Special Assistant for Strategic Planning	$ 74,400
Special Assistant for Aviation Policy	$ 83,600
Special Assistant and Director for Drug Enforcement and Program Compliance	$ 81,400
Special Assistant for Personnel and Organization Management	$ 71,200
Special Assistant for Special Projects	$ 59,216
Staff Assistant to the Secretary	$ 52,020
Staff Assistant to the Secretary	$ 35,825
Staff Assistant to the Secretary	$ 24,705
Staff Assistant to the Secretary	$ 50,342
Staff Assistant to the Secretary	$ 35,825
Motor Vehicle Operator	$ 28,404
The Deputy Secretary	$ 96,600
Staff Assistant to the Deputy Secretary	$ 45,441
Special Assistant to the Director for Drug Enforcement and Program Compliance	$ 42,601
Staff Assistant	$ 25,529
Staff Assistant	$ 20,195
Staff Assistant	$ 24,705
Staff Assistant	$ 20,195
Director, Executive Secretariat	$ 77,600

Deputy Executive Secretary for Management	$ 69,086
Deputy Executive Secretary for Policy	$ 52,020
Director, Office of Small and Disadvantaged Business Utilization	$ 71,200
Special Assistant for Minority Affairs	$ 44,021
Special Assistant to the Director	$ 35,825
Staff Assistant to the Director	$ 25,529
Director, Office of Commercial Space Transportation	$ 79,200
Assistant Secretary for Public Affairs	$ 83,600
Deputy Assistant Secretary (Management)	$ 79,200
Special Assistant to the Assistant Secretary	$ 44,021
Special Assistant to the Assistant Secretary	$ 38,213
Special Assistant to the Assistant Secretary	$ 25,529
Staff Assistant to the Assistant Secretary	$ 28,113
Director, Office of Media Relations and Special Projects	$ 61,190
Special Assistant to the Director	$ 59,216
Assistant Secretary for Budget and Programs	$ 83,600
Special Assistant to the Assistant Secretary	$ 44,021
General Counsel	$ 83,600
Associate General Counsel	$ 79,200
Staff Assistant to the General Counsel	$ 35,825
Assistant Secretary for Governmental Affairs	$ 83,600
Staff Assistant to the Assistant Secretary	$ 37,019
Staff Assistant to the Assistant Secretary	$ 37,019
Staff Assistant to the Assistant Secretary	$ 30,887
Staff Assistant to the Assistant Secretary	$ 42,601
Director, Office Of Congressional Affairs	$ 71,200
Congressional Liaison Officer	$ 53,698
Congressional Liaison Officer	$ 44,021
Congressional Liaison Officer	$ 37,012
Director, Office of Intergovernmental and Industry Affairs	$ 59,216
Deputy Director (Intergovernmental)	$ 61,190
Deputy Director for Industry Affairs	$ 52,020
Assistant Secretary for Policy and International Affairs	$ 83,600
Deputy Assistant Secretary	$ 71,200
Special Assistant to the Assistant Secretary	$ 37,019
Special Assistant to the Assistant Secretary	$ 37,019

FEDERAL AVIATION ADMINISTRATION

Administrator	$ 96,600
Deputy Administrator	$ 83,600
Special Assistant to the Administrator	$ 63,164
Staff Assistant to the Administrator	$ 27,206
Chief Counsel	$ 77,600
Assistant Administrator for Public Affairs	$ 77,600
Special Assistant to the Assistant Administrator	$ 61,190
Staff Assistant to the Assistant Administrator	$ 29,891
Assistant Administrator for Government and Industry Affairs	$ 77,600
Special Assistant for Government and Industry Affairs	$ 61,190
Congressional Liaison Officer	$ 50,342

Associate Administrator for Policy, Planning, and International Aviation	$ 81,400
Staff Assistant to the Associate Administrator	$ 37,019
Associate Administrator for Airports	$ 81,400

FEDERAL HIGHWAY ADMINISTRATION

Administrator	$ 96,600
Deputy Administrator	$ 83,600
Special Assistant to the Administrator	$ 65,138
Chief Counsel	$ 81,400
Director of External Communications	$ 81,400
Special Assistant to the Director	$ 48,281
Special Assistant to the Director	$ 35,825
Staff Assistant to the Director	$ 24,705
Associate Administrator for Policy	$ 81,400
Associate Administrator for Motor Carriers	$ 81,400

FEDERAL RAILROAD ADMINISTRATION

Administrator	$ 89,000
Staff Assistant to the Administrator	$ 24,705
Chief of Staff	$ 73,692
Public Affairs Officer	$ 48,992
Associate Administrator for Policy	$ 74,400

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Administrator	$ 89,000
Deputy Administrator	$ 83,600
Special Assistant to the Administrator	$ 44,021
Special Assistant to the Administrator	$ 37,019
Special Assistant to the Director, Office of Public Affairs	$ 48,992
Director for Intergovernmental Affairs	$ 68,100
Chief, Consumer Affairs Division	$ 42,601

URBAN MASS TRANSPORTATION ADMINISTRATION

Administrator	$ 89,000
Deputy Administrator	$ 79,200
Special Assistant to the Administrator	$ 65,138
Staff Assistant to the Deputy Administrator	$ 29,891
Associate Administrator for Budget and Policy	$ 71,200
Chief Counsel	$ 81,400
Area Director, Eastern Area, New York	$ 77,600

SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION

Administrator	$ 83,600
Special Assistant to the Administrator	$ 52,020
Special Assistant to the Administrator	$ 35,825

RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION

Administrator	$ 83,600
Deputy Administrator	$ 77,600
Special Assistant to the Administrator	$ 61,190

SENATOR LAUTENBERG: For the record, please list by department operating administration the number of Presidential, non-career SES, and Schedule C appointees for fiscal years 1988, 1989, 1990, and provided in the budget request for 1991.

ANSWER: A count of Presidential, non-career SES, and Schedule C appointees for fiscal years 1988, 1989 and 1990 (as of March 31, 1990) follows: We currently have 107 political appointees on board with recruitment for 13 more in process. We cannot provide a detailed listing for fiscal year 1991 as the distribution of non-career SES and Schedule C appointees by operating administration may change substantially, due to turnover and the staffing program needs of each operating administration. However, we anticipate a total FY 1991 requirement for a minimum of 120.

U.S. DEPARTMENT OF TRANSPORTATION

OFFICE OF THE SECRETARY

Fiscal Year	Presidential	Non-Career SES	Schedule C
1988	7	20	37
1989	7	11	40
1990 (3/31/90)	7	13	38

OFFICE OF THE INSPECTOR GENERAL

Fiscal Year	Presidential	Non-Career SES	Schedule C
1988	1	0	0
1989	1	0	0
1990 (3/31/90)	0	0	0

UNITED STATES COAST GUARD

Fiscal Year	Presidential	Non-Career SES	Schedule C
1988	0	0	0
1989	0	0	0
1990 (3/31/90)	0	0	0

FEDERAL AVIATION ADMINISTRATION

Fiscal Year	Presidential	Non-Career SES	Schedule C
1988	2	4	7
1989	1	2	5
1990 (3/31/90)	2	5	7

FEDERAL HIGHWAY ADMINISTRATION

Fiscal Year	Presidential	Non-Career SES	Schedule C
1988	1	4	4
1989	1	3	3
1990 (3/31/90)	1	5	4

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Fiscal Year	Presidential	Non-Career SES	Schedule C
1988	1	3	6
1989	0	1	6
1990 (3/31/90)	1	1	5

FEDERAL RAILROAD ADMINISTRATION

Fiscal Year	Presidential	Non-Career SES	Schedule C
1988	1	1	3
1989	1	2	2
1990 (3/31/90)	1	1	3

URBAN MASS TRANSPORTATION ADMINISTRATION

Fiscal Year	Presidential	Non-Career SES	Schedule C
1988	1	4	5
1989	0	4	3
1990 (3/31/90)	1	4	2

SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION

Fiscal Year	Presidential	Non-Career SES	Schedule C
1988	1	1	3
1989	1	0	3
1990 (3/31/90)	1	0	2

RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION

Fiscal Year	Presidential	Non-Career SES	Schedule C
1988	0	3	1
1989	0	2	2
1990 (3/31/90)	0	2	1

SENATOR LAUTENBERG: For FY 1989 and FY 1990 to date, please provide a listing of overseas travel taken by members in the Office of the Secretary. Please list the destination of the trip, the purpose, duration of the trip, the cost and number of persons involved on the trip. Please provide this information separately for each Secretarial Office, including Immediate Office of the Secretary, and Immediate Office of the Deputy Secretary.

ANSWER: The requested information follows:

OFFICE OF GENERAL COUNSEL
(4/30/88 - 4/24/89)

Destination	Purpose	Duration (Days)	Cost	No. of Persons
New Delhi, India & Vienna, Austria	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*13*	*$3,799*	*1*
London, England	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*5*	*$1,884*	*1*

Paris, France	Participate as chair of U.S. Delegation in Commercial Space talks with European Space Agency	6	$2,058	1
Ottawa, Canada	Participate in meeting of US-Canada Great Lakes/ Seaway Consultative Group	3	$ 597	1
London, England	Participate as a member of U.S. Delegation in Aviation Negotiations	5	$1,373	1
Canberra, Australia/ Wellington, New Zealand	Participate as a member of U.S. Delegation in Aviation Negotiations	18	$4,867	1
Rio de Janeiro, Brasil	Participate as a member of U.S. Delegation in Aviation Negotiations	8	$2,375	1
Tokyo, Japan/ Manila, Phillipines	Participate as a member of U.S. Delegation in Aviation Negotiations	6	$1,479	1
Budapest, Hungary	Participate as a member of U.S. Delegation in Aviation Negotiations	7	$1,828	1
Bern, Switzerland	Participate as a member of U.S. Delegation in Aviation Negotiations	6	$1,894	1
Beijing, China	Participate as a member of U.S. Delegation in Commercial Space Launch Negotiations	9	$3,570	1
Beijing, China	Participate as a member of U.S. Delegation in Maritime Negotiations	8	$3,760	1
Paris, France	Participate as a member of U.S. Delegation in Aviation Negotiations	7	$1,918	1
Ottawa, Canada	Participate as a member of U.S. Delegation in discussion of Cross-Border Trucking issues	2	$ 443	1
London, England	Participate as a member of U.S. Delegation in Aviation Negotiations	6	$1,684	1
Beijing, China	Participate as a member of U.S. Delegation in Aviation Negotiations	7	$3,326	1
Ottawa, Canada	Participate as a member of U.S. Delegation in Aviation Negotiations	2	$ 475	1
Rome, Italy	Participate as a member of U.S. Delegation in Aviation Negotiations	7	$1,398	1
Seoul, Korea	Participate as a member of U.S. Delegation in Aviation Negotiations	8	$2,335	1

OFFICE OF GENERAL COUNSEL
(4/25/89 - 4/30/90)

Destination	Purpose	Duration (Days)	Cost	No. of Persons
Laredo, Mexico	*Participate as a member of U.S. Delegation in Motor Carrier Negotiations*	*5*	*$ 693*	*1*
Oslo, Norway	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*5*	*$1,847*	*1*
Port of Spain Tobago/Trinidad Barbados	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*9*	*$1,568*	*1*
Tokyo, Japan	*Participate as a member of U.S. Delegation in Aviation Negotiation*	*8*	*$3,798*	*1*
Fiumicino, Italy Krakow, Poland Prague, Czechoslovakia	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*14*	*$2,530*	*1*
Paris, France	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*11*	*$1,797*	*1*
Budapest, Hungary Frankfurt, Germany	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*8*	*$1,921*	*1*
Bangkok, Thailand	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*6*	*$2,081*	*1*
Dublin, Ireland	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*5*	*$1,338*	*1*
Paris, France	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*8*	*$1,633*	*1*
Tokyo, Japan	*Participate as a member of U.S. Delegation in Maritime Negotiations*	*11*	*$3,188*	*1*
Santo Domingo, Dominican Republic	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*4*	*$ 759*	*1*
London, England	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*10*	*$2,075*	*1*
Frankfurt, Germany	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*11*	*$1,381*	*1*
Jeddah, Saudia Arabia & Ankara, Turkey	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*13*	*$3,052*	*1*
Rome, Italy	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*11*	*$1,346*	*1*
Moscow, USSR London, England	*Participate as a member of U.S. Delegation in Maritime Negotiations*	*8*	*$3,201*	*1*

Ottawa, Canada	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*2*	*$ 417*	*1*
Ottawa, Canada	*Participate as a member of U.S. Delegation in Trucking Negotiations*	*2*	*$ 515*	*1*
London, England	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*6*	*$1,198*	*1*
London, England	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*6*	*$ 933*	*1*
Oslo, Norway	*Participate as a member of U.S. Delegation in Consultative Shipping plenary & Working Group*	*5*	*$ 781*	*1*
Paris, France	*Participate as a member of U.S. Delegation in Aviation Negotiations*	*5*	*$1,748*	*1*

Office of the Assistant Secretary for Policy & International Affairs

4-22-88 - 4-26-89

Destination	Purpose	Duration Days	Cost	# Participants
FY 1988				
May				
Geneva, Switzerland 5-15-88	To attend and give speech @ International Chamber of Commerce	3	$576	1
Geneva, Switzerland 5-15-88	To attend CRS Symposium	8	$728	1
Montreal, Canada 5-23-88	To attend ICAO Study Group meeting	6	$1,456	2
June				
Ottawa, Canada 6-20-88	To participate as member of U.S. Delegation in consultation with Canadians	3	$1,123	1
Budapest, Hungary 6-10-88	To represent DOT during Semiannual IATA slot meeting.	8	$784	1
London, England 6-13-88	To negotiate with the United Kingdom on CRS and vendor access	5	$1,648	1
Quebec, Canada 6-12-88	Speaker at Annual Meeting of International Association of Great Lakes	2	$397	1
Montreal, Canada 6-20-88	Speaker at International Aviation Conference on Airports	2	$490	1
Quebec, Canada 6-22-88	U.S./Canadian Transportation Consultative Forum	1	$742	3

July

London, England 7-17-88	BAA User Charge talks	4	$3,094	2

September

Rio de Janeiro, Brazil 9-3-88	Civil Aviation negotiations with Government of Brazil	7	$2,352	1
Oslo, Norway 9-12-88	Negotiations with Scandanavians	5	$3,800	2

FY 1989

October

Montreal, Canada 10-5-88	To attend ICAO Meeting on CRS Code of Conduct	1	$421	1
Quebec, Canada 10-18-88	To represent DOT and National Transportation Facilitation Committee at U.S./Canada Joint Government Airline Facilitation Conference	3	$750	1
Geneva, Switzerland 10-29-88	To participate as a delegate to the U.N. Liner Code Review Conference	22	$4,300	1
Paris, France 10-31-88	To participate as a key U.S. representative to the OECD Seminar	5	$3,326	2

November

Paris, France & Bonn, Germany 11-5-88	To represent U.S. at the 41st Session of the OECD Steering Committee for Road Transport Research	7	$483	1
Ottawa, Canada 11-6-88	Participate in meeting of the International Project Team (IPT) of the American National Standards Institute's Accredited Standards Committee on Electronic Data Business Interchange (ASC-X12)	2	$630	1
Bonn, Germany 11-7-88	U.S. negotiations on the Berlin Air Regime with respect to an application by Eurobrerlin	6	$1,700	1
Brussels, Belgium 11-9-88	Attend meeting of European leaders to discuss the future of aviation in Europe	3	$1,094	1
Montreal, Canada 11-11-88	Representative at IATA Slot meeting	3	$968	1

December

Ottawa, Canada 12-5-88	To head U.S. delegation at the annual meeting of the U.S. Canada Motor Carrier Consultative	2	$922	2

Paris, France 12-6-88	Member at U.S. delegation to Technical Working Group consultations on Commercial Space Launch Services with European Space Agency (ESA)	6	$1370	1
Paris, France 12-11-88	To attend the U.S.-ECAC negotiation of new reference fare levels under Article 5 of U.S.-ECAC	7	$1,825	1
January				
London, England 1-2-89	Discussions with the U.K. Government on Manchester and Capacity	6	$3,530	2
Jeddah, Saudi Arabia 1-5-89	Bilateral Aviation Consultations with Saudi Arabia	5	$2,800	1
Narita, Japan Beijing, China 1-18-89	Civil Aviation Negotiations with the Government of the Peoples Republic of China & to view customs clearance procedures at Narita Airport in Japan	8	$1,338	1
February				
Ottawa, Canada 2-7-89	Represent DOT & TFC at Canadian Government discussions concerning the delineation and inclusion of inspectional staff immunities and privileges in the U.S./Canada preclearance agreement	2	$475	1
Montreal, Canada 2-14-89	To participate in ICAO Council Session on aviation security	3	$363	1
Mexico City, Mexico 2-23-89	To meet with civil aviation officials of the Government of Mexico	2	$162	1
Rome, Italy 2-26-89	Bilateral Negotiations with Government of Italy	7	$1,795	1
March				
Osaka, Japan Seoul, Korea 3-7-89	To participate in civil aviation negotiations with Government of Korea and to meet with officials of the New Kansai International Airport Company in Osaka, Japan to discuss future cargo and passenger service requirements of U.S. carriers at airport	8	$3,100	2

Paris, France 3-15-89	To participate in meeting of the Urban Transport Coordinating Group of the European Conference of Ministers of Transport and to present and discuss the Terms of Reference for a study of the Economic Performance of Light Rail Transit Systems	3	$1,124	1

April

Geneva, Switzerland 4-15-89	To participate in the Group on Negotiation of Services, in connection with GATT	8	$1,654	1
Naples, Rome, Italy/Bonn, Germany/Bern, Geneva, Switzerland/ London, England/ Paris, France 4-21-89	To accompany the Secretary to Europe to discuss international aviation security matters with European counterparts	10	$2,550	2
Ciudad Juarez, Mexico 4-23-89	To head the U.S. delegation for discussions with Mexico on motor carrer issues	6	$1,145	1

Office of the Assistant Secretary for Policy & International Affairs
Overseas Travel
(04/27/88 - 04/25/89)

Destination	Purpose of Trip	Days	$ Cost	# Travelers
SAN JUAN, PUERTO RICO	TO REPRESENT THE DOT AT INTERNATIONAL MARITIME ORGANIZATION SEMINAR	8	1,330	1
OSAKA/TOKYO, JAPAN	BILATERAL AVIATION NEGOTIATIONS W/ GOV'T OF JAPAN AND TO ATTEND MTG.W/US AND THE KANSAI INT'L AIRPT.	9	6,000	2
OSLO,NORWAY/LONDON,ENG.	AVIATION NEGOTIATIONS W/ SCANDINAVIAN COUNTRIES & INFORMAL TALKS WITH UNITED KINGDOM AUTHORITIES	8	3,072	2
GENEVA, SWITZERLAND	PARTICIPATE IN 7/17-21/88 SESSIONS OF THE GROUP ON NEGOTIATIONS OF SERVICES (GNS) WITH GENERAL AGREEMENT TARIFFS AND TRADE (GATT)	8	1,807	5
TIJUANA, MEXICO	HEAD U.S./ DELEGATION FOR DISCUSSIONS W/ MEXICO ON MOTOR CARRIER ISSUES	3	900	1
EDINBURG, SCOTLAND	TO PARTICIPATE IN THE ANNUAL MEETING OF THE EUROPEAN COUNCIL OF THE MINISTERS OF TRANSPORT (ECMT)	6	1,000	1
PORT OF SPAIN/BARBADOS	NEGOTIATE NEW AVIATION AGREEMENT W/ TRINIDAD AND TOBAGO & HOLD CONSULTATIONS W/ BARBADOS	8	1,700	1
WARSAW POLAND/PRAGUE CZEC	NEGOTIATIONS W/ GOVERNMENTS OF POLAND AND CZECHOSLOVAKIA	10	3,170	1
PARIS, FRANCE	ATTEND US-ECAC PLENARY NEGOTIATION REGARDING RENEWAL OF THE MEMO OF UNDERSTANDING ON NORTH ATLANTIC PRICING	9	3,070	2
BUDAPEST, HUNGARY	BILATERAL AVIATION NEGOTIATIONS W/ THE GOVERNMENT OF HUNGARY	6	1,751	1
BRUSSELS, GENEVA	TO PARTICIPATE IN EEC ON COMPUTER RESERVATIONS SYSTEM (CRS) ISSUES	6	1,563	1
BANGKOK, THAILAND	BILATERAL AVIATION NEGOTIATIONS	5	2,183	1
MONTREAL, CANADA	TRIENNIAL INTERNATIONAL CIVIL AVIATION ORGANIZATION ASSEMBLY	7	1,143	2
PARIS, FR/BRUSSEL, BELG	TO PARTICIPATE AS A MEMBER OF THE US DELEGATION TO THE OECD MEETING IN PARIS & TO MEET W/ EC COMM	5	1,794	1
BANGKOK/BRUSSELS	TO PARTICIPATE IN THE PACIFIC RIM COMMERCIAL AVIATION CONFERENCE TO DISCUSS INT'L. AVIATION POLICY.	8	2,507	1
DUBLIN, IRELAND	TO ENGAGE IN AVIATION NEGOTIATIONS W/ THE IRISH GOV'T.	6	1,004	1
SEOUL KOREA/TOKYO JAPAN	TO PARTICIPATE IN BILATERAL AVIATION NEGOTIATIONS WITH THE GOV'T. OF JAPAN REGARDING CARGO ISSUES	8	1,430	2
GENEVA, SWITZERLAND	TO PARTICIPATE IN THE OCTOBER 23-27 SESSION OF THE GROUP ON NEGOTIATION OF SERV. REGARDING GATT	7	1,704	1
HONG KONG/SINGAPORE	TO PROVIDE INPUT TO FAA REPRESENTATIVES AT THE IATA SCHEDULING CONF MEETING.	11	700	1
OSLO, NORWAY/BRUSSEL, BELG	TO PARTICIPATE IN OECD WORKING GROUP ON SECTION 301 COMPLAINT	7	2,637	1
GENEVA, SWITZERLAND	TO REPRESENT THE US AT A SPECIAL SESSION & SEMINAR OF THE ECE WORKING PARTY ON COMBINED TRANSPORT	11	800	1
LONDON, ENGLAND	TO ATTEND BILATERAL NEGOTIATIONS W/ THE GOVERNMENTS OF THE UK & USSR	10	3,714	1
DOMINICAN REPUBLIC	CONSULTATIONS W/ THE DOMINICAN REPUBLIC TO OBTAIN RATIFICATION OF A MODERN AIR TRANSPORT AGREEMENT	6	303	1
GENEVA, SWITZERLAND	TO PARTICIPATE IN THE SESSION OF THE GROUP ON NEGOTIATION OF SERVICES TO PLAN STRATEGY	5	1,214	1
PARIS, FRANCE	TO REPRESENT THE DOT AS HEAD OF US DELEGATION AT THE EUROPEAN CONF. OF MINISTERS OF TRANSPORTS,ETC.	5	764	1
BONN, GERMANY/PARIS FRANC	TO PARTICIPATE IN BILATERAL AVIATION NEGOT W/THE GOV TS OF GERMANY & FRANCE	12	4,021	2
PARIS, FRANCE	TO PARTICIPATE ON US DELEGATION TO NEGOTIATIONS ON BILATERAL CIVAIR AGREEMENT	7	1,303	1
SAUDIA ARABIA/TURKEY	TO REPRESENT DOT AT BILATERAL AVIATION CONSULATIONS W/ SAUDIA/TURKEY REG. A LONG TERM AVIATION AGR MT	8	3,401	1
MEXICO CITY, MEXICO	TO HEAD THE US DELEGATION TO THE US-MEXICO TRANSP WORKING GROUP MTG (& GIVE SEMINAR AT UNIV. OF TEXAS)	14	1,307	1
HONOLULU, HAWAII	TO PARTICIPATE AS DOT REP. ON THE U.S. DELEGATION IN BILATERAL CIVIL AVIATION NEGO. W/ AUSTRALIA	5	2,072	2
MOSCOW,USSR/LONDON U.K.	IN MOSCOW TO PARTICIPATE IN MARITIME NEGOTIATIONS; IN LONDON TO DISCUSS PREPARATIONS FOR US/CSG TALKS	7	2,700	1
GENEVA, SWITZERLAND	TO PARTICIPATE IN THE JAN. 16-10 SESSION OF THE GNS NEGOTIATIONS OF GATT	5	800	1

GENEVA, SWITZERLAND	TO PARTICIPATE IN 2/26-3/2 SESSION OF THE GNS NEGOTIATIONS OF GATT	6	1,110	1
MONTREAL, CANADA	TO ATTEND ICAO STUDY GROUP ON CRS	6	1,101	1
ROME, ITALY	TO ATTEND BILATERAL NEGOTIATIONS W/ THE GOV'T. OF ITALY	5	2,044	2
BRUSSELS, BELGIUM/HELSINKI FINLAND/OSLO, NORWAY	TO NEGOTIATE SHIPBUILDING BILATERALS	7	2,088	1
OTTAWA, CANADA	TO PARTICIPATE IN AIR TRANSP. NEGOTIATIONS	2	461	1
LONDON, ENGLAND	BILATERAL NEGOTIATIONS W/ THE USSR	5	1,400	1
OTTAWA, ONTARIO CANADA	TO PARTICIPATE IN NEGOTIATIONS RELATING TO ONTARIO GOVT. ACTIONS AGAINST USE OF US BUILT SOFT TRAILERS	2	1,141	2
COSTA RICA/GUATEMALA	TO PARTICIPATE IN BILATERAL AVIATION NEGOTIATIONS W/ THE COUNTRIES OF COSTA RICA/GUATEMALA	6	1,009	1
PARIS, FRANCE	TO NEGOTIATE SHIPBUILDING BILATERALS	5	1,616	1
SPAIN/FRANCE/BELGIUM/GERMANY/ENGLAND/IRELAND	TO ACCOMPANY THE SECY. AT MTGS W/HIS COUNTERPARTS ON AVIATION SECURITY	8	800	1
LONDON UNITED KINGDOM	CONSULTATIONS W/ UK GOVT REPRESVS FROM MINISTRIES OF TRANSPORT,ETC. ON TEST AIRPORT SECURITY	8	1,020	1
PARIS, FRANCE	TO NEGOTIATE SHIPBUILDING BILATERALS	6	3,743	2
GENEVA, SWITZERLAND	TO PARTICIPATE IN THE MARCH 24-31 SESSION OF SERVICES (GNS) NEGOTIATION OF GATT	8	2,030	1
LONDON, ENGLAND	TO ATTEND BILATERAL NEGOTIATIONS WITH THE SOVIET UNION	7	2,076	8
GENEVA, SWITZERLAND	TO PARTICIPATE IN THE 5/5-12 SESSION OF GNS NEGOTIATION OF GATT	8	1,190	1
BELGIUM/NORWAY/DENMARK SWEDEN	TO ACCOMPANY DEPUTY SECRETARY CINO FOR DISCUSSIONS IN EACH COUNTRY	7	3,000	1
OTTAWA CANADA	PARTICIPATE IN THE APRIL 23-27 MTG. OF THE UN/EDIFACT RAPPORTEURS	3	647	1

OFFICE OF THE ASSISTANT SECRETARY FOR BUDGET AND PROGRAMS

FY 1989 (10/1/88 - 4/24/89)

Nassau, Bahamas (via Miami and Key (West)	Escort Secretary on visit to CG facilities regarding drug law enforcement	3	$192	1

4/25/89 - 4/30/90

None

OFFICE OF THE ASSISTANT SECRETARY FOR GOVERNMENTAL AFFAIRS

FY 1989 (10/1/88 - 4/30/89)

Nassau, Bahamas	To meet with Bahamian officials and other U.S. agencies involved with drug interdiction efforts	3	$500	1

(5/1/89 - 4/25/90)

Paris, France	To accompany the Secretary and a Congressional delegation to Paris Air Show	7	925	1
Paris, France	To accompany the Secretary and a Congressional delegation to Paris Air Show	6	682	1
London, England/ Prestwick, Scotland	To accompany Cong'l delegation for DOT-related briefings	10	1,677	1

OFFICE OF THE ASSISTANT SECRETARY FOR ADMINISTRATION

FY 1989 (10/1/88 - 4/24/89) None

(4/25/89 - 4/20/90)

Rome, Italy/ London, England	Secretary's Office Staff Support	10	$2,623	1
Bonn, FRG	Secretary's Office Staff Support	8	1,700	1
Paris, France	Secretary's Office Staff Support	7	1,477	1
Rome, Italy/Bonn FRG/Paris, France/ London, England	Secretary's Office Staff Support	8	$ 844	1
Paris, France	Secretary's Office Staff Support	8	1,730	1
Rome, Italy	Deputy Sec.'s Office Staff Support	9	1,765	1
Paris, France	Deputy Sec.'s Office Staff Support	9	1,975	1
Bonn, FRG/Madrid, Spain	Deputy Sec.'s Office Staff Support	9	1,847	1
Paris, France/ Brussels, Belgium	Secretary's Office Staff Support	9	2,832	1
Frankfurt, FRG	Secretary's Office	6	1,153	1
Bonn, FRG	Secretary's Office Staff Support	7	1,492	1
Berlin, FRG	Secretary's Office Staff Support	7	1,424	1
Paris, France/ Bonn, Frankfurt, Berlin, FRG/ Brussels, Belgium	Secretary's Office Staff Support	6	646	1

OFFICE OF THE ASSISTANT SECRETARY FOR PUBLIC AFFAIRS

(10/1/88 -4/26/89)

Nassau, Bahamas	To assist Secretary with press activities	3	615	1

(4/27/89) - 4/26/90)

Paris, France/ Rome, Italy/ Bonn, FRG/ London, England	To assist Secretary with press activities	8	832	1
Edinburgh, Scotland/ London, England	To assist Deputy Secretary with press activities	9	1,717	1
Paris, France/ Frankfurt, Bonn, FRG/ Brussels, Belgium	To assist Secretary with press activities	6	651	1

Destination	Purpose	Duration (Days)	Cost	No. of Participants

Immediate Office of the Secretary

FY 88 - FY 89 (4/26/88 - 4/30/89)

Destination	Purpose	Duration (Days)	Cost	No. of Participants
Luxembourg	European Council of Ministers and Chairman of Transport Committee of European Parliament meetings	14	$5709	4
France	US/European Space Agency Working Group on Government Supports for Commercial Launch Services Providers Meetings	6	$1512	1
Canada	ICAO Ministerial Meetings	8	$4529	4
Bahamas	USCG field/site tour; flight demos, aerostat briefings	7	$3940	3
Alaska	Exxon oil spill assessment	3	$204	2
Belgium, U.K. W. Germany	Aviation security officials meetings	6	$1580	1
Italy, W. Germany, France, U.K., Switzerland	Aviation security officials meetings; airport inspections	8	$1500	1

Immediate Office of the Deputy Secretary

FY 88 - FY 89 (4/26/88 - 4/30/89)

Destination	Purpose	Duration (Days)	Cost	No. of Participants
Canada	U.S./Canada Tranpsortation Consultative Forum	2	$196	1
China	Part of U.S. Delegation to discuss Long March issue	9	$3552	1
Belgium, U.K., W. Germany	Aviation security officials meetings	6	$1580	1

Office of Commercial Space Transportation

FY 88 (4/26/88 - 9/30/88)

None

FY 89 (10/1/88 - 4/26/89)

France	To chair and participate in the U.S. Delegation to U.S./European Space Agency working group on government supports for commercial launch services providers and to draft principles for international trade in this sector.	6	$2998	2
Italy	To present a paper on DOT space launch insurance at the 5th International Conference on Space Activities	4	$1234	1

IMMEDIATE OFFICE OF THE SECRETARY

(5/1/89 - 4/30/90)

Paris, France	To attend Paris Int'l Air Show	7	$5,591	4
Paris, France/ Bonn, Frankfurt, Berlin, FRG/ Brussels, Belgium	To tour and observe various transportation modes, meet with airport security reps., ministers of transport, and ambassadors of FRG and Belgium	7	6,380	5

IMMEDIATE OFFICE OF THE DEPUTY SECRETARY

(5/1/89 - 4/30/90)

Edinburgh, Scotland	To attend European Council of Transport Ministers	6	3,727	2
Rome, Italy/ Paris, France/ Frankfurt, Bonn, FRG/ Madrid, Spain	To observe rail and airport security systems	8	4,400	3
Brussels, Belgium/ Oslo, Norway/ Copenhagen, Denmark/ Stockholm, Sweden	Meet with: EC92 European Community Officials; Consultative Shipping Group; Innovative Rail Technology and Shipping Officials. Participate in Innovative Rail Technology Discussions.	6	9,000	3

OFFICE OF COMMERCIAL SPACE TRANSPORTATION

(4/27/89 - 4/25/90)

Bonn, FRG	To speak on U.S. commercial space transportation at the European Aerospace Conference.	5	$1,313	1

Kourou, Fr. Guiana	To speak on U.S. commercial space transportation at the meetings of the Space Transportation Technical Committee and Commercial Space Transportation Subcommittee of the American Institute of Aeronautics and Astronautics.	7	1,532	1
Montreux and Geneva, Switzerland	To speak, participate and exhibit at "Space Commerce '90," the 3rd International Conference and Exhibition on the Commercial and Industrial Uses of Outer Space, and meet with representatives from European space agencies.	9	4,639	2

ADVISORY COMMITTEES

SENATOR LAUTENBERG: Please provide for the record a listing and cost breakdown of all advisory committees currently established in the Department. Provide the advisory committee name, the modal administration in which it works, the purpose of the advisory committee, and the cost of the advisory committees for fiscal years 1989, 1990, and that requested for FY 1991.

ANSWER: In addition to the information below on existing advisory committees, the Department is considering the implications of the Sense of Congress in the FY 1990 Department of Defense Appropriations Act calling for a commission, with representatives from the Department of Transportation, to study the shortage of pilots. It should also be noted that the FY 1991 estimate reflects a level of spending based on current levels, with little room for new requirements. The President's Budget for FY 1991 proposes to eliminate the spending cap on Advisory Committees.

DEPARTMENT OF TRANSPORTATION
Advisory Committees
(in dollars)

	Admin.		Committee Name	1989 Actual	1990 Estimate	1991 Estimate
(1)	FHWA	*	Commercial Motor Vehicle Safety Reg. Review Panel	15,000	15,000	15,000
(2)			National Motor Carrier	40,000	40,000	40,000
			Subtotal	55,000	55,000	55,000
(3)	NHTSA		Motor Vehicle Safety Research	360	500	500
(4)		*	National Driver Register	0	21,000	21,000
			Subtotal	360	21,500	21,500

(5)	CG	Chemical Transportation	2,430	2,500	2,500
(6)		* Coast Guard Academy	7,500	8,000	8,000
(7)		Hou. Galveston Nav. Sfty.	849	850	850
(8)		Lower Miss. Waterway Sfty.	2,486	2,500	2,500
(9)		* National Boating Safety	22,200	22,600	25,000
(10)		National Offshore Safety	500	600	600
(11)		NY Harbor Traffic Mgmt.	2,250	2,500	2,500
(12)		* Rules of the Road	17,000	32,000	50,000
(13)		* Towing Safety	5,750	3,800	3,800
(14)		* Comm. Fishing Industry	30,000	31,500	31,500
		----------	----------	----------	----------
		Subtotal	90,965	106,850	127,250
(15)	FAA	Air Traffic Procedures	2,518	400	5,000
(16)		Radio Tech. Comm./Aeronautic	81,000	81,000	100,000
(17)		Natl Aviation Security	0	10,000	15,000
(18)		Air Trans Pers & Trng Qual	0	1,000	1,500
(19)		Airport Capacity	0	1,000	2,000
(20)		Aviation Rulemaking	0	0	2,500
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		Subtotal	83,518	93,400	126,000
(21)	RSPA	* Technical Hazardous Liquid Pipeline Safety	10,000	10,000	20,000
(22)		* Tech. Pipeline Safety Stds.	10,000	10,000	20,000
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		Subtotal	20,000	20,000	40,000
(23)	OST	Comm. Space Transportation	2,631	6,000	3,700
(24)		Electronic Tariff	150	250	500
(25)		* Minority Business Res. Ctr.	454	6,150	6,150
(26)		** Handicapped Parking	0	2,000	2,000
(27)		Aviation Security and Terrorism	0	1,000,000	0
		----------	----------	----------	----------
		Subtotal	3,235	1,014,400	12,350
		Additional Requirements	---	88,850	17,900
		==========	==========	==========	==========
		GRAND TOTAL	253,078	1,400,000	400,000

* Required by statute.   ** Required by committee report.

DEPARTMENT OF TRANSPORTATION
Advisory Committees

	Admin.	Committee Name	Committee Description
(1)	FHWA	Commercial Motor Vehicle Safety Reg. Review Panel	To analyze all state laws and regulations pertaining to commercial motor vehicle safety and to advise the Secretary whether they are compatible with Section 206 of the Motor Carrier Safety Act of 1984.
(2)	"	National Motor Carrier	To make recommendations to the Highway Administrator on matters which directly affect commercial motor vehicles.

(3)	NHTSA	Motor Vehicle Safety Research	To provide advice on matters relating to motor vehicle safety research.
(4)	"	National Driver Register	To review maintenance, operations, and responsiveness of N.D.R.
(5)	USCG	Chemical Transportation	To advise the Office of Marine Safety concerning water transportation of bulk hazardous materials.
(6)	"	Coast Guard Academy	To advise and make recommendations to the Commandant on Academy curriculum and faculty matters.
(7)	"	Hou. Galveston Nav. Safety	To provide local expert advice on navigation safety and operation of VTS in the Houston/Galveston area.
(8)	"	Lower Miss. Waterway Safety	To provide local expert advice on navigation safety on the Lower Mississippi River.
(9)	"	National Boating Safety	To advise the Commandant on recreational boating safety policy.
(10)	"	National Offshore Safety	To advise the Commandant on activities involving or supporting the exploration of offshore mineral and energy resources.
(11)	"	NY Harbor Traffic Mgmt.	To provide local expert advice on navigation safety in New York Harbor.
(12)	"	Rules of the Road	To advise the Secretary on matters of navigation safety including Inland and International Rules of the Road.
(13)	"	Towing Safety	To advise the Secretary on shallow draft inland and coastal waterway navigation and towing safety.
(14)	USCG (cont.)	Comm. Fishing Industry	To advise the Commandant on safety of commercial fishing industry vessels, including qualifications and training of personnel.
(15)	FAA	Air Traffic Procedures	To review present procedures and recommend standardization, clarification, and upgrading of air traffic terminology and procedures.
(16)	"	Radio Technical Commission for Aeronautics	To share views and knowledge on state-of-the-art developments in aeronautics and highlight problem areas for solution.
(17)	"	National Aviation Security	To provide Administrator with recommendations to improve methods, equipment and procedures to ensure a higher degree of safety for the traveling public.

(18)	"	Air Trans Personnel & Training Quality	To make recommendations to the Administrator on means to improve training and qualifications of air carrier crewmembers and other air transportation employees.
(19)	"	Airport Capacity	To make recommendations to the Secretary on innovative funding mechanisms to provide for airport capacity projects.
(20)	"	Aviation Rulemaking	To reach concensus and draft rulemaking on specific aviation matters.
(21)	RSPA	Technical Hazardous Liquid Pipeline Safety	To advise the Administrator on technical feasibility and practicality of proposed liquid pipeline safety standards.
(22)	"	Tech. Pipeline Safety Stds.	To advise the Administrator on technical feasibility and practicality of proposed gas pipeline safety standards.
(23)	OST	Comm. Space Transportation	To advise the Secretary on all aspects of commercial space transportation including expendable launch vehicles.
(24)	"	Electronic Tariff	To advise the Department on technical, operational and policy objectives of an automated tariff filing system.
(25)	OST (cont.)	Minority Business Res. Ctr.	To advise the Secretary on methods by which the Minority Business Resource Center can increase participation of minority businesses in all modes of transportation and in implementing the National Transportation Policy.
(26)	"	Handicapped Parking	To develop recommended rulemaking on a uniform system for handicapped parking.
(27)	"	Aviation Security and Terrorism	Presidential Commission to study Pan Am 103 disaster and recommend policies and practices to prevent terrorist acts involving aviation.

STATE REGULATION OF THE EXPRESS PACKAGE INDUSTRY

SENATOR LAUTENBERG: Please provide an update on the status of the study on state regulation of the express package industry as requested in the Senate Report accompanying the FY 1990 appropriations bill.

ANSWER: A draft of that study should be ready for review by the Office of the Secretary by the middle of June. It may be necessary to seek an extension to the July 1st due date from the Committee.

CONSULTING SERVICES

SENATOR LAUTENBERG: The Office of the Secretary's fiscal year 1991 request contains approximately $850,000 for advisory and assistance services. Please provide a listing of the major contracts contemplated, (those above $50,000), the subject area to be studied, and the requested funds.

ANSWER: FY 1991 Consulting Services Funding Level: $849,000

Contracts Over $50,000

Industry policy studies looking at prototype system development, international competition and space launch markets ($350,000)

Safety analysis, technical support, space safety and risk assessment studies ($420,000)

SENATOR LAUTENBERG: For the record, please provide the same information, including the name of the firm, for those contracts entered into for consulting services above $50,000 for FY 1990.

ANSWER: Advisory and assistance contracts obligated in FY 1990 are primarily to support the Office of Commercial Space Transportation.

FY 1990 Consulting Services Funding Level: $717,000

Contracts over $50,000

Comprehensive Technologies Int'l Inc. (CTI)— ($200,000)
Industry policy study for development of a STAR System Data-base to implement and maintain statistical evaluative capabilities covering national and foreign space launch systems, markets and regulatory environments.

Haight, Gardner, Poor & Havens-- ($81,000)
Legal support to develop regulations and establish insurance and financial responsibility requirements— ($369,000)

SRS Technologies
Research Triangle Institute (RTI)
ICF—Safety analysis, technical support, space safety and risk assessment studies

OFFICE OF COMMERCIAL SPACE TRANSPORTATION

SENATOR LAUTENBERG: The administration originally planned, beginning in 1991, to establish user fees for the commercial space licensing program. Please update the Committee on that effort, including how user fees will be assessed and the amount of revenues expected to be generated in fiscal years 1991 through 1993.

ANSWER: OCST is undertaking a study to examine various options for implementing the user fee program. The study will address how the amount of the user fee will be determined, the structure of charges and the circumstances under which user fees may be waived. Factors that will be considered in reaching a final decision in these areas include the potential impact of user fees on newer, entrepreneurial companies and the nature of the activity covered by a license.

The total amount to be recovered through user fees is estimated at $200,000 in FY 1991, $250,000 in FY 1992 and $300,000 in FY 1993. These fees can be collected administratively and do not require legislation. The Office of Commercial Space Transportation (OCST) plans to assess user fees on applicants for a license authorizing commercial launch activities and on other persons requesting certain licensing determinations in the absence of an application. Government launches are not subject to DOT regulation under the Commercial Space Launch Act of 1984, as amended, and therefore are not subject to user fees.

WORKING CAPITAL FUND

SENATOR LAUTENBERG: Within the Activity Support Services, direct operating expenses have increased within the Working Capital Fund (WCF) from $69.5 million in 1989 to a 1991 budget request of $86.9 million. Does the Department foresee a continuing trend up in this line item, or can we expect it to level off soon or in the near future?

ANSWER: The President's Budget requests $86.9 million for FY 1991. This is a 6.2 percent increase over FY 1990 compared to a 24.2 percent increase over FY 1989 enacted for FY 1990. The increase of $21 million in Support Services from FY 1989 to FY 1991 ($86.9 million - $65.9 million) is due primarily to mandatory increased rate costs assessed by GSA for all DOT headquarters space rental. In fact, this item alone accounted for $14 million of the total increase. Since the WCF has no control over this cost, we cannot predict how quickly costs will rise in the future.

Factors contributing to the remaining $7 million increase include the additional costs relating to the new Headquarters Consolidation Project, and much needed enhancements and upgrades to our communications and payroll systems. Each of these will be reflected in our budget request for the next two-to-five years.

All other costs should remain stable except for inflationary adjustments.

SENATOR LAUTENBERG: Similarly, under Transportation Computer Activities, direct operating expenses have increased from $29.7 million in 1989 to a requested funding level of $42.2 million in 1991. What does the Department project for this line item activity in the next several years? Is this a continuing trend up, or is this going to level off?

ANSWER: The Working Capital Fund (WCF) projects a continual growth for the budget function Transportation Computer Activities in the next several years. The Department is currently developing several major financial management systems such as the Departmental Accounting and Financial Information System (DAFIS), Uniform Procurement Management System (UPMS), Administrative System Improvement Program (ASIP) and is upgrading its Office Automation. Implementation of these systems will strengthen our internal controls. Costs associated with each of these projects, except DAFIS development, will increase over the next two-to-five years. DAFIS costs will decline as the current project nears completion in FY 1992.

In addition, the recent upgrade of the Transportation Computer Center (TCC) has generated an increased workload as DOT operating administrations are steadily requesting additional services. While this requires an increase in the WCF's budget, DOT's total costs may actually decrease since many of these services were being procured or would be procured outside of DOT at a higher cost.

SENATOR LAUTENBERG: The budget for FY 1991 requests $1.1 million for an Executive Information System. For the record, please provide the Committee more specifics as to the type of data or management tools that might be produced by an Executive Information System, and the personnel who would be using the produced data. Also include new hardware and software that would be purchased under this $1.1 million request.

ANSWER: The FY 1991 budget request of $1.1 million for an Executive Information System (EIS) includes costs for contractors, Office Automation and Technology Services (OATS) standard workstations and EASEL mainframe version software.

Operational data from certain transactional based systems, such as grants, financial management, personnel management and major acquisition management review will be used as input to the EIS database to produce useful analytical information to be used by the Secretary and senior management. The EIS will provide a summarized, consistent and reliable set of data for all managers to reference. This will also address the shortcomings (e.g., the Department needs to continue efforts to (1) develop and adopt agency-wide tools for policy decision-making, and (2) devise and use early warning indicators of safety risk and measures of program performance) cited by GAO in its Management Review of DOT in 1988.

SENATOR LAUTENBERG: Under the budget request for FY 1991, $1.3 million is requested under Miscellaneous Activities. Please break out for the Committee costs associated with non-capitalized equipment, travel, and training covered under this request.

ANSWER: The requested increase of $1.3 million in FY 1991 for miscellaneous costs for Transportation Computer Activities is for non-capitalized equipment ($714K) - personal computers, related software and peripheral equipment; travel and transportation ($141K) - expansion of DAFIS operational support in FY 1991; training ($40K); and, minor software upgrades ($405K) - monitoring tools, protocol conversion and performance evaluation.

OFFICE OF INSPECTOR GENERAL

STATEMENT OF RAYMOND DECARLI, ACTING DEPUTY INSPECTOR GENERAL

Mr. Chairman and Members of the subcommittee, it is my pleasure to meet with you to discuss the Fiscal Year (FY) 1991 budget request for the Office of Inspector General. Accompanying me today are Mr. H. Rae Scott, Assistant Inspector General for Investigations, and Mr. John W. Lainhart IV, Assistant Inspector General for Policy, Planning and Resources.

Mr. John W. Melchner, the Inspector General (IG) at the Department of Transportation (DOT) for 3 years, retired on December 31, 1989. As you know, he was an exceptionally competent manager with high professional and ethical standards. During his tenure, he made many contributions to improve IG operations in DOT and to further the independence and objectivity of the entire IG community. The Secretary of Transportation has initiated the interviewing process to identify Mr. Melchner's successor.

In addition to Mr. Melchner's retirement, in the past 12 months, three of our seven senior executives also retired. With them, over 100 years' combined experience was lost. Fortunately, we have succeeded in finding very dedicated and talented individuals to fill these three positions. We are all committed to providing Congress and the Department the high quality audit and investigative work that all have come to expect.

Our FY 1991 budget request is for $33.987 million and 470 full-time permanent positions. While this request represents a net increase of $2.309 million over the $31.678 million FY 1990 appropriation, the number of positions has not changed. Pay adjustments and price increases for contract audit support account for almost 75 percent of the requested increase. Half the remaining 25 percent is to continue our approved Audit and Investigation Computer Integration System (AICIS). The remaining $311,000 includes $178,000 to cover inflation costs and $133,000 for additional training, travel, engineering support, laboratory testing, and a permanent change of station move.

OVERALL ACCOMPLISHMENTS

During FY 1989, we issued 1,896 audit reports. We made recommendations to improve the economy, efficiency, and effectiveness of DOT programs and operations with a potential impact of $696 million and questioned the eligibility of $109 million in costs. The resolution of our audit findings resulted in management commitments to seek recoveries and more effectively use resources amounting to $782 million.

We opened 278 investigative cases and closed 232 cases. Investigative and prosecutive efforts during this period resulted in 92 convictions; 119 indictments; $27 million in fines, restitutions and recoveries; 91 debarments and suspensions; 119 years probation; and 55 years in prison sentences.

AUDIT ACCOMPLISHMENTS

As in prior years, we have concentrated our audit resources on Departmentwide and Modalwide audits. These projects examine functions that account for a large portion of the Department's or a Modal Administration's expenditures. For example, one of the Federal Aviation Administration's (FAA) largest programs is the Airport Improvement Program (AIP). In FY 1989 this program accounted for $1.4 billion in obligations. We reviewed both the grant approval and grant administration processes for this program.

In the grant approval audit, we determined whether: (1) sponsor applications were accurate; (2) proper planning documents were used in support of sponsor applications and/or projects; (3) projects were prioritized in accordance with Headquarters criteria; and (4) funds were consistently applied to preclude over/underfunding of eligible projects. We concluded that FAA was doing a good job, with one exception--the grantees were not starting the projects as soon as required after approval. We attributed the delays to FAA's lack of enforcement of AIP handbook procedures that required sponsors to submit final project plans and specifications for approval before grant award or by the extended date under special grant conditions. Using the Federal Highway Administration (FHWA) inflationary cost index for road construction, we estimated that the airport construction delays resulted in increased costs of $7.9 million. FAA generally concurred with the recommendations; however, FAA did not agree that the increased costs cited in our report were solely attributable to their failure to follow handbook procedures. FAA noted that construction start delays are incurred by sponsors for reasons entirely independent of the grant approval process.

Our audit work on the AIP grant administration process concentrated on the quality of asphalt and concrete pavements that had been paid for by FAA. About half of the airport improvement funds are spent for asphalt and concrete pavement. The objective of our audit was to determine if we are getting what we are paying for. To date, we have issued five reports covering material testing requirements for airport pavement materials (FAA's Southern Region, Great Lakes Region, Southwest Region, Western-Pacific Region, and Northwest Mountain Region). We looked at pavement material records totaling $44 million and found that $33 million of the pavement materials had not been fully tested in accordance with contract agreements. Furthermore, $16 million of the pavement materials tested (including some of those insufficiently tested) were not within allowable test tolerances, but were still used. We also found that contract payment reductions of over $791,000 had not been taken for acceptance of out-of-tolerance materials. FAA generally agreed for future grants to (1) review payment reductions, (2) ensure that sponsors complied with grant conditions, and (3) direct sponsors to develop written policies and procedures for enforcing testing requirements. We are preparing a Modalwide report to FAA Headquarters on our findings. This report will include statistical projections showing the magnitude of the material testing deficiencies.

Last year we issued several regional reports that addressed the need for improved funds management procedures at specific FHWA regions. We subsequently issued a Modalwide report that consolidated the audit results and statistically projected the dollar impact of our findings. Of $847 million total funds on completed and inactive projects we reviewed in 12 states, about $283 million could have been deobligated and made available for other highway improvements. FHWA agreed with our recommendations and is taking positive corrective actions, including (1) strengthening their emphasis on project funds management at the field office level, (2) working with the states to close out and deobligate excess funds for inactive projects, and (3) discussing the importance of project funds management with American Association of State Highway and Transportation officials.

At last year's hearing, we discussed the cost growth on the U.S. Coast Guard's (USCG) 378-foot Fleet Renovation and Modernization Project. One of the factors that contributed to contractor claims for delay and disruption costs was USCG's inability to provide updated drawings showing the current or "as built" configuration for these vessels. Anticipating that this could be a problem for future vessel repair contracts, we initiated a review to determine if the USCG was maintaining up-to-date drawings on other vessel classes. We found that the USCG had not maintained essential vessel drawings on a current basis as required by its Naval Engineering Manual. Procedures were not established to ensure that essential drawings were updated when vessel components or configurations were changed or modified. In addition, existing drawings were not filed and controlled after USCG consolidated its vessel maintenance functions from 12 districts into two logistics centers. The USCG agreed to implement our recommendations. In addition, the USCG formed an ad hoc committee to evaluate available technology and improvements to update, store, and maintain drawings, and is conducting configuration reviews of selected vessels that include validation and markup of "as built" drawings.

The extent of audit work required by legislation has increased. We are required to annually review the accuracy and propriety of USCG Superfund expenditures that are billed to the Environmental Protection Agency, assess the Department's controls for awarding and monitoring consulting service contracts, and evaluate the Department's compliance with legislation concerning the use of public funds for influence peddling and lobbying.

Requests from congressional committees have also increased. This past year in response to congressional requests, we issued two reports on Falcon Jet performance; a report on the USCG's Dolphin Helicopter performance, maintenance problems, and the use of these aircraft in drug interdiction missions; and a report on the procedures and controls for managing the Essential Air Service Program. Additionally, we responded to numerous requests from individual Members of Congress to review specific issues of interest to them. Each request was evaluated and promptly answered.

Furthermore, the House Appropriations Committee requested that we review the design of USCG's prototype motor lifeboat before funds are spent to purchase five preproduction boats. We are reviewing concerns about the structure, stability, roll over and self-righting capabilities of the motor lifeboat design.

INVESTIGATIVE ACCOMPLISHMENTS

Our investigative efforts have concentrated on fraud in DOT-funded grant programs and in the Department's procurement processes. During FY 1989, we investigated allegations of fraud in 18 grant and 23 procurement cases. The detection and prevention of bid rigging activities in DOT-funded programs is an important priority, although other investigative workload has resulted in a smaller percentage of our resources being available for this work. Our bid rigging emphasis this past year has been on an investigation of highway contractors who we believe have engaged in a multistate or regional conspiracy. This ongoing project is a departure from our previous efforts, which examined individual contract awards. Our joint efforts with the Department of Justice Antitrust Division during FY 1989 resulted in 10 indictments, 12 convictions, $5 million in fines, and 10 years' probation. We have continued to emphasize to the Modal Administrations that debarment is appropriate for firms convicted of criminal violations. There were 68 Modal Administration-initiated debarment actions in FY 1989.

During FY 1989, we devoted a significant amount of our resources to investigations which resulted from computer matches of FAA airmen records with law enforcement data bases. Our most recent count shows that 322 individual cases have been accepted for prosecution by U.S. attorney's offices, 4,194 cases have been declined, and 302 cases are still awaiting a prosecutive decision. Seventy pilots have been indicted to date, and 24 pilots have been convicted or have pled guilty to charges against them.

Presently, one investigation under the Program Fraud Civil Remedies Act is being coordinated with the Department of Justice and another is under review by the General Counsel. We have additional investigations under way which have potential for being prosecuted under the Act.

DEPARTMENTAL PROGRAM MANAGEMENT AND INTEGRITY

We are very cognizant of our responsibilities for identifying internal control weaknesses that can result in fraud, waste, and abuse. Subsequent to the Department of Defense (DOD) "Illwind" procurement fraud disclosures, we performed a vulnerability assessment to determine if the same problems could exist in DOT's procurement programs. We found some shortcomings, such as the need for protective markings on contractor bid documents. However, we did not find the kind of problems that were reported in DOD.

Similarly, soon after the improprieties at the Department of Housing and Urban Development were disclosed, we initiated another assessment to determine if similar vulnerabilities existed in DOT's grant award programs. We concluded that the risks in DOT's grant award programs were low, except for Urban Mass Transportation Administration's (UMTA) discretionary grants.

We advised Departmental officials of the results of these assessments and are following up to ensure that needed corrective actions are taken. We also initiated Departmentwide audits of the controls over small purchases and the Small and Disadvantaged Business Enterprise (8A) Program, because these programs do not have extensive internal control features.

We have worked closely with Department management to ensure that significant internal control problems were identified and reported under the Federal Managers' Financial Integrity Act (FMFIA) Program. We used a very unique process that involved bringing together the senior staff from our organization and from the General Accounting Office (GAO). A separate, open, and thought-provoking discussion was held to assess, based on our combined experience, the major management control issues in each Modal Administration. After each meeting, we briefed the new Modal Administrator on our conclusions stressing their responsibility to examine each issue and to assess the system of internal controls. The Modal Administrators were very receptive to this process and, in my opinion, did a fine job in preparing this year's FMFIA report.

In our Semiannual Report to Congress for the period ending September 30, 1989, we highlighted the most significant issues that we and GAO had identified. They were:

- Major acquisitions in FAA and USCG;
- Grants management in UMTA and FAA;
- Safety oversight in FAA, the Federal Railroad Administration (FRA), and Research and Special Programs Administration (RSPA);
- Environmental compliance in USCG and FAA; and
- Loan guarantees in the Maritime Administration.

AUDIT AND INVESTIGATIVE PRIORITIES

We will continue to emphasize auditing economy and efficiency of the Department's operations, focusing on Departmentwide and Modalwide audits. Audit resources will be directed to reviewing procurement and contract administration; financial and cash management controls; safety oversight; grants management; and confidentiality, integrity, and availability of computer systems. Historically, we accomplish about 80 percent of the audits in our plan. We are flexible enough to accommodate the need for requested and other high priority audits, such as the ongoing audit of air carrier flight delay data requested by RSPA and an audit recently completed on FRA's operating rules that was requested by the Secretary. This flexibility allows us to be responsive to the needs of the Department and Congress.

Our investigative priority will continue to be cases which could involve the safety of the traveling public. In these instances, we will continue to work closely with safety officials throughout our investigative activity to prevent or decrease the possibility of an incident or accident. We will also continue to concentrate our investigative efforts on grant and procurement fraud throughout DOT. The majority of our recent investigations have continued in areas of grant and procurement fraud. Bid rigging investigations will remain a priority investigative area, but will continue to decline due to our increased efforts in other fraud areas.

Finally, we plan to continue to conduct "special inquiries." For example, after the Valdez oil spill, we conducted a statistical computer match of the USCG's merchant mariner license records against the National Highway Traffic Safety Administration's (NHTSA) National Driver Register. We also evaluated actions needed to improve the usefulness of FAA's Enforcement Information System. These inquiries have proven very useful in handling issues and allegations which do not need a full scope audit and are not criminal in nature, but nonetheless need to be reviewed.

SUMMARY

I believe the coming year will be challenging for the Office of Inspector General. We look forward to that challenge, and I am confident we can fulfill our responsibilities with the resources requested for FY 1991.

This concludes my statement. I will be glad to answer any questions you may have.

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

Disadvantaged Business Enterprise Program

SENATOR LAUTENBERG: The Surface Transportation and Uniform Relocation Assistance Act of 1987 added women-owned businesses to those businesses classified as disadvantaged. Has the IG found any increase in "front" businesses, that is businesses set up on paper to look as though they are owned and controlled by a disadvantaged person, being involved in the Disadvantaged Business Enterprise program, since women-owned businesses became eligible for participation? How does the Inspector General guard against the certification of "front" businesses?

ANSWER: The number of allegations the IG has received relating to disadvantaged business enterprises (DBE) has not increased since the Surface Transportation and Uniform Relocation Assistance Act of 1987 was passed. In fact, allegations have decreased annually since 1987.

Several methods are relied on to deter and detect those businesses that might attempt to obtain DBE status through fraudulent means. FHWA has encouraged the states to use administrative sanctions to enforce program requirements relating to the DBE Program. As a result, the states have instituted a variety of measures, such as monetary penalties, bidding disqualification, and subcontractor decertification and suspension to deter irregular activities in the DBE Program.

The IG does not have the authority or the means to certify DBEs. Instead, this is a responsibility of the states. To detect DBE fraud, we rely on the cooperative efforts of FHWA, the states, and industry and minority organizations to report DBE violations to the IG or other appropriate entity.

SENATOR LAUTENBERG: In the Inspector General's estimation, are "front" businesses in the DBE program a problem in any particular region of the country, in any particular mode, or in any particular job category?

ANSWER: Most allegations relating to DBE fraud reported to us involve FHWA. The particular job category most cited is in the trucking area. However, since it is estimated that in excess of 10,000 firms presently are certified eligible to work as DBEs on Federal-aid highway projects, the relatively few numbers of alleged violations reported to the IG (52 in FY 1987, 45 in FY 1988, 32 in FY 1989, 21 in FY 1990 to date) does not allow us to make any significant determinations regarding the propensity of DBE fraud in any particular Mode, job category, or region of the country.

High Risk Government Programs

SENATOR LAUTENBERG: In December of 1989, the Senate Government Affairs Committee released lists prepared by the Office of Management and Budget describing 73 specific programs in which federal dollars would be at risk and might be vulnerable to fraud, waste, and abuse. Within the Department of Transportation, the OMB noted that FAA and Coast Guard major system procurement capabilities might not be adequate to deal with the procurement budgets that are expected over the next five years. Does the Office of Inspector General agree with that OMB analysis, and what actions has the IG taken in response to that OMB suggestion regarding the FAA and Coast Guard procurement programs?

ANSWER: The Office of Management and Budget (OMB) list of high-risk programs was developed using input from IG organizations. We fully agree with the OMB analysis. Our Semiannual Report to Congress for the period April 1, 1989 through September 30, 1989 identified five high-risk areas in DOT. One of these was major acquisitions in FAA and USCG. Our report said:

"The Department spent approximately $2 billion in Fiscal Year (FY) 1988 for the procurement of goods and services. The majority of those expenditures were for major acquisitions in FAA and USCG. For FY 1990, FAA requested nearly $2 billion to fund planned construction and equipment procurements and installations. USCG requested close to $700 million to fund capital improvements, including vessel and aircraft acquisitions. The OIG and the GAO have been very active in performing reviews of specific system acquisitions. During the past 2 years, the OIG issued 8 reports on FAA and USCG acquisition issues that were highlighted in our semiannual reports to Congress. Two of these reports are in this semiannual report (Pages 10 and 11). During the same period GAO issued 9 reports on FAA and USCG acquisitions. These audits have shown that both FAA and USCG need to provide top management oversight in requirements determination, acquisition planning, specifications development, contract award, preproduction testing, contract modifications, and contract administration."

During the past 2 years, the OIG and GAO have given emphasis to major acquisition programs in both the FAA and USCG. We have also reviewed various acquisition processes such as the issuance of contract modifications. We intend to continue this emphasis. Additionally, we are monitoring actions taken to correct weaknesses cited by the Modal Administrators' FMFIA reports.

SENATOR LAUTENBERG: In the estimation of the Inspector General, please comment on these specific areas for both the FAA and the Coast Guard. Are improvements needed in the procurement requirement determinations? Are improvements necessary in acquisition planning? Are improvements necessary in the specifications development? Are improvements necessary in the area of contract award? Are improvements necessary in preproduction testing? Are improvements necessary in the contract modification issuance process? Are improvements needed in the area of contract administration? For those areas in which the Inspector General feels improvements are needed and necessary, please list those areas and what improvements specifically would be required.

ANSWER: All of the acquisition processes listed in this question were cited as problems areas in the previously mentioned Semiannual Report to Congress. Some specific improvements for each of these weaknesses are:

Requirements Determination: Avoid chasing "state-of-the-art" technology, buy off-the-shelf technology, minimize requirements to essential needs, and improve coordination with industry and users.

Acquisition Planning: Validate benefit-cost analyses, avoid optimism in schedules and costs, and recognize software development complexities.

Specification Development: Avoid overspecifications by reference, maintain current drawings, plans, etc.; and thoroughly define interfaces with other systems.

Contract Award: Expand life cycle planning, and maintain sufficient documentation.

Preproduction Testing: Adhere to test and evaluation plans, and adequately test the system before going to production.

Contract Modifications: Avoid the use undefinitized modifications; prepare independent Government cost estimates, negotiation memorandums, and cost/price analyses.

Contract Administration: Ensure adequate staffing, provide improved training, and ensure timely contract closeouts.

SENATOR LAUTENBERG: Regarding the Urban Mass Transportation Administration, OMB said that UMTA needs to improve the timely disbursements of grants and needs to improve its review and oversight of new start and rail modernization projects during the planning and start-up stages. Is the Inspector General familiar with this recommendation, and do you agree? If so, what improvements are necessary, and are they now being undertaken?

ANSWER: We are familiar with the recommendation made by OMB. Audit findings in our 1988 report on the audit of UMTA's letter of credit system for paying grantees do not agree with OMB's recommendation concerning the need to improve the timely disbursement of grants. Our audit showed that UMTA's letter of credit system was providing funds to grantees on a timely basis. However, we agree with OMB's recommendation for UMTA to improve its review and oversight of projects. Our reports continue to include recommendations relating to grant management oversight issues. We have identified the inability of UMTA's limited field staff to monitor the grant program as the underlying cause of the oversight problems. We believe the expanded use of outside contractors to provide oversight beyond construction management is an appropriate means for improving UMTA's project management oversight capabilities. UMTA is implementing the new authority contained in the 1990 DOT Appropriations Act that permits the use of capital grant funds for oversight beyond construction. Based on this expanded authority, UMTA is currently undertaking action to use outside contractors to perform financial reviews and conduct safety and financial compliance reviews.

SENATOR LAUTENBERG: Within the Urban Mass Transportation Administration, is the closing of active projects still a problem? If so, have steps been taken to improve this area?

ANSWER: Last year we issued a report on UMTA's research program. We reported that UMTA needed to improve its controls over the monitoring of research projects to assure that project managers promptly initiate closeout action on projects that had never started, were inactive, or had been completed. Research projects constitute only a small part of UMTA's project funding and we do not consider our findings indicative of all UMTA grants. Since 1986, UMTA has been engaged in a major effort to close inactive projects. As a result of that effort, UMTA reported that 1,711, 2,354, and 2,369 projects were closed in FYs 1986, 1987, and 1988, respectively. About 1,500 active projects were closed in FY 1989. Prior to its special project closing initiative, only about 800 projects were closed each year. According to UMTA, a significant backlog of inactive projects no longer exists. We plan to review the closing of active projects during an audit of UMTA's project funds management which is included in our FY 1991 Annual Audit Plan.

SENATOR LAUTENBERG: The Departmental Accounting and Financial Information System (DAFIS) was supposed to provide timely, comparable program spending and other financial management data for department heads. Is the DAFIS system on time, and will it assist the Department's efforts to prevent fraud, waste and abuse?

ANSWER: As a result of a November 1987 change in the management and direction of the DAFIS project, the DAFIS development schedule was revised to extend project completion (i.e., full DAFIS implementation) from September 1991 to June 1992. According to the revised development schedule, Departmentwide implementation of DAFIS is progressing on time. To date, FAA, NHTSA, and part of the USCG have completed implementation and are operating under DAFIS. Once DAFIS is fully implemented in USCG, the system will be processing approximately 90 percent of the Department's accounting transactions. During the next 12 months (June 1, 1990 through May 31, 1991), implementation is to be completed in the remainder of USCG, the Office of the Secretary of Transportation (OST), RSPA, and FRA. Implementation in UMTA, FHWA, and Maritime Administration is scheduled for August 1991, February 1992, and June 1992, respectively.

Our only audit work directed at DAFIS has been limited to the system features and functions associated with accounts payable. In our view, DAFIS contains features that, if properly implemented, can go a long way in reducing opportunities for waste, fraud, and abuse in the accounts payable area. For example, we recently identified potential internal control deficiencies in FAA accounts payable functions currently operating under DAFIS. As a result, these accounts payable functions could be susceptible to fraud, abuse, and error. While the potential accounts payable deficiencies represent operational weaknesses and not system weaknesses, the DAFIS Office is pursuing DAFIS-related automation initiatives which, if properly implemented, should provide an effective and efficient solution to these potential problems.

Also, the DAFIS Office has placed heavy emphasis on ensuring that the system contains strong internal controls. For example, the DAFIS Office has contracted for a comprehensive and detailed internal controls review of DAFIS, which began in August 1989. Additionally, through the activities of the DAFIS Steering Committee, the DAFIS Office has focused regularly on the effective implementation of internal controls within the system and is committed to taking whatever actions may be necessary to assure that DAFIS complies fully with OMB Circulars A-123, A-127, and A-130.

We plan to continue reviewing DAFIS development and implementation. In FY 1991, we plan to conduct an audit aimed at determining DAFIS Office effectiveness in managing and controlling the project.

Fiscal Year 1990 Committee Report

SENATOR LAUTENBERG: On page 199 of Committee Report 101-121, accompanying the appropriations bill for 1990, the Committee directed the Inspector General to make a thorough review of the essential air service program, including the management and negotiation of contracts under this program. What is the status of that review as requested by the Committee, and when will a report of that review be provided to the Committee?

ANSWER: The final audit report on the Essential Air Service Program, Report No. AS-OT-0-012 was issued December 27, 1989. On January 8, 1990, a copy of the final audit report was sent to the committee. When the report was issued, a few unresolved recommendations existed. Subsequently, management provided an action plan that we determined to be satisfactory.

SENATOR LAUTENBERG: Report language in last year's Committee report directed the Secretary of Transportation to reimburse the Inspector General from the operating budgets of those modal operating administrations for which the Inspector General contracted with the Defense Contract Audit Agency (DCAA) for audit support. To what extent has this directive been followed, and for the record, provide the amount of total DCAA support in dollars by modal operating administration, and also provide for the record the amount of reimbursements received from those modal administrations to pay for this audit support.

ANSWER: Our approved FY 1990 budget included $2.44 million for DCAA services. Currently, we are projecting that approximately $2.4 million will be our actual FY 1990 billings. Because our overall billings to date have not exceeded the amount appropriated by Congress, even though individual Modals have exceeded their budget estimates, we have not requested OST's assistance in seeking reimbursement for DCAA services from the Modal Administrations.

The following is a summary of DCAA reimbursements by agency for FY 1990:

	FY 1990 Budget	6-Months Actual Billing	Modal Reimbursements
FAA	$ 732,000	$ 771,000	-0-
USCG	658,000	160,000	-0-
FHWA	146,000	36,000	-0-
OST	73,000	27,000	-0-
UMTA	24,000	28,000	-0-
RSPA	634,000	21,000	-0-
FRA	3,000	66,000	-0-
NHTSA	122,000	12,000	-0-
MARAD	48,000	13,000	-0-
	$2,440,000	$1,134,000	-0-

SENATOR LAUTENBERG: The budget request includes an additional $859,000 above the 1990 funding level for pricing increases associated with DCAA audit services. Are these simply price increases or for the purchase of additional services?

ANSWER: The FY 1991 increase of $859,000 for DCAA is for the purchase of additional services. In FY 1990, DCAA increased their rate 27 percent, from $37.46 to $47.49, effective October 12, 1989. However, since these increases were in effect in FY 1990, no rate increase was necessary for FY 1991. Therefore, the purchase of approximately 18,000 hours of additional services accounts for all of the requested increase. Our FY 1991 audit services are based on estimates from each Modal Administration as to their projected need for preaward and postaward audit services.

SENATOR LAUTENBERG: For the record provide the total amount spent and the number of DCAA hours purchased for fiscal years 1988, 1989, and estimated for fiscal years 1990 and 1991. Provide the information by agency and operating account.

ANSWER: The following represents amounts spent and hours purchased for contract audit services provided by DCAA.

Modal Administration	FY 1988 Actual Dollars	FY 1988 Actual Hours	FY 1989 Actual Dollars	FY 1989 Actual Hours	FY 1990 Projected Dollars	FY 1990 Projected Hours	FY 1991 Projected Dollars	FY 1991 Projected Hours
FAA	$ 712,900	20,480	$ 974,000	26,000	$ 732,000	15,415	$1,407,000	29,625
USCG	433,000	12,440	282,000	7,530	658,000	13,855	725,000	15,270
FHWA	57,700	1,660	32,000	850	146,000	3,075	225,000	4,740
OST	136,900	3,935	95,000	2,540	73,000	1,535	18,000	380
UMTA	53,800	1,545	43,000	1,150	24,000	505	200,000	4,210
RSPA	58,700	1,685	64,000	1,710	634,000	13,350	493,000	10,380
FRA	24,200	695	36,000	960	3,000	65	115,000	2,420
NHTSA	36,400	1,045	2,000	50	122,000	2,570	36,000	760
MARAD	9,300	265	36,000	960	48,000	1,010	80,000	1,685
TOTAL	$1,522,900	43,750	$1,564,000	41,750	$2,440,000	51,380	$3,299,000	69,470

SENATOR LAUTENBERG: What, in the Inspector General's estimation would be the affect if the requested increase for DCAA audit support were not granted? What work would not get done in what particular areas or in what particular regions?

ANSWER: DCAA provides audit support with the objective of advising us and Modal Administrations whether contract costs (actual and estimated) are fairly presented. DCAA determines if contractors follow applicable Federal regulations and cost accounting standards in pricing goods and services and performs preaward, postaward and closeout audits.

The Federal Acquisition Regulations require that audits be performed on every negotiated procurement (initial proposal, contract, or contract modification) in excess of $500,000. Further, the Transportation Acquisition Regulations (TAR) require an audit of the closeout of any cost reimbursement contract over $1,000,000.

If the budget request for contract audit support provided by DCAA is not granted, we will not be able to provide the level of contract audit support and assurance to the Department that it has come to expect. For example, for the period April 1, 1989 through March 31, 1990, $315 million, or 8 percent of the $4.7 billion of contract costs audited by DCAA were unsupported, questioned, or funds that could be put to better use. Therefore, we will request DCAA to prioritize its work, doing preaward audits first. This will result in an increased backlog of postaward audits. To the extent that these contract cost audits are not performed, or are not performed timely, the Government increases its risk of paying contractors for costs to which they are not entitled.

Office of Auditing

SENATOR LAUTENBERG: In the budget request, you stated that a significant amount of user charges could be generated if FAA would establish charges for special services provided to aircraft manufacturers, air carriers, and air agencies. And further, you stated that user charges could be used to offset the cost of these activities, which totaled $204.5 million in FY 1987. In summary, please list those special services for which reimbursement could be charged or user fees be generated, and an estimate of the amount of user charges that could be generated in FY 1991 if such charges were levied.

ANSWER: The special services identified which would be appropriate for user charges included the inspection and certification services provided to aircraft manufacturers, airlines, and other air agencies. Before user charges could be levied, specific approval from Congress would be required. At the time of our audit, these costs were being financed from general tax revenues. We recommended that legislation be initiated to establish user charges for these services. As an alternative, we recommended that these services be financed from the Airport and Airway Trust Fund which would be equivalent to user charges since the fund is derived from aviation taxes. FAA was responsive to our alternative recommendation. Accordingly, the FY 1991 budget provides that 85 percent of FAA's budget be financed from the trust fund including

$2.846 billion for operations. Since the inspection and certification services are to be financed from the trust fund, a form of user charges, the establishment of additional user charges for these services would not be appropriate.

SENATOR LAUTENBERG: What has FAA done in response to your suggestion that user charges associated with the Airmen and Aircraft Registry fully reflect the cost of providing services to recipients?

ANSWER: The Anti-Drug Abuse Act of 1988 gave FAA the authority to establish or increase and collect four user fees. These included airman certificate fees, aircraft registration fees after transfer of ownership, aircraft registration renewal fees, and processing fees for major repair or alteration of a fuel tank or fuel system. In response to this Act, on March 12, 1990, the FAA published in the Federal Register a proposed regulation providing for the fees. Comments on the proposed regulation were to be received on or before May 11, 1990 but the comment period was extended to July 11, 1990. Regarding existing fees, the Airport and Airway Safety and Capacity Expansion Act of 1987 gave FAA the authority to adjust these fees in proportion to changes in the Consumer Price Index since 1973. However, as of May 30, 1990, the fees have not been adjusted.

SENATOR LAUTENBERG: The Office of Auditing in its budget request stated that the Coast Guard has not been fully successful in insuring that they receive proper reimbursement of drug interdiction expenses from the Customs Forfeiture Fund. What is the status of the U.S. Coast Guard claims submitted to the Customs Forfeiture Fund? Please detail for fiscal years 1987, 1988, and 1989 the amount of claims submitted and the amount of reimbursement received.

ANSWER: On March 22, 1990, USCG and Customs Service executed a Memorandum of Understanding to establish procedures for USCG billings and reimbursements from the Customs Forfeiture Fund for incremental expenses associated with law enforcement seizures. It provides for prompt billings and reimbursements on a monthly basis.

In 1988, the Seventh Coast Guard District resubmitted over $1 million in past claims, for the period 1983 to 1989, to the Customs Service for reimbursement. The Customs Service determined that approximately $600,000 in expenses will not be reimbursed because the expenses were incurred prior to the establishment of the Customs Forfeiture Fund or because insufficient documentation to support the claim exists. The Customs Service has agreed to certify for payment a portion of the claims amounting to about $400,000. However, these funds will not be available for current year obligation because the expenses occurred during prior FYs. Under 31 U.S.C. 1552(b), reimbursements must be made to the same appropriation in the same year.

The USCG will establish accounts receivable for proper seizure expenses for reimbursement. This will ensure that operating funds are not negatively impacted. The USCG estimates that they will receive about $100,000 annually in reimbursements from the Customs Forfeiture Fund.

ADP Project Costs

SENATOR LAUTENBERG: Under the category of hardware purchase, the Inspector General is requesting $205,000 for micro-computers, $65,000 for mini-computer upgrades, and $60,000 for local area network, or LAN, upgrade. What specifically will the Inspector General get for these Funds?

ANSWER: These purchases will replace prior generation microcomputer hardware which has reached, or will have reached, the end of its useful life. The new equipment will also provide capabilities for local automation, storage, print support, and connection to the major Departmental computer systems. These enhanced capabilities will support the first phase of our AICIS project, which is aimed at providing us with (1) the ability to perform more comprehensive and complex audits and/or investigations, (2) enhanced office automation and communications, and (3) significant improvements in our reporting presentation and timeliness.

The $205,000 for microcomputers will be used to purchase 50 replacement word processing workstations and associated printers, and communications adapters. The $60,000 for local area networks (LAN) will provide the base hardware for local area networking capabilities for Headquarters and one regional office. The $65,000 for the OIG minicomputer upgrade is needed to support the increased user base associated with the new LANs. The upgrade consists of a central processor upgrade, additional memory, direct access storage, tape storage, printers, and input/output and communications capacity upgrades.

SENATOR LAUTENBERG: A total of $91,000 is requested for software purchase, specifically, what would be purchased under this request?

ANSWER: $61,000 of the $91,000 requested for software will be used to replace our obsolete microcomputer-based word processing and audit/investigative software. The microcomputer software to be purchased consists of a single set of word processing, spreadsheet/graphics, and database software, which will enable us to fully standardize our microcomputer-based office automation software. This standardization will help to reduce future training and maintenance costs. The remaining $30,000 will be used to acquire the minicomputer software associated with our planned upgrade of that equipment. This software is needed, in conjunction with the hardware upgrade described in the previous answer, to support the increased minicomputer user base.

These software purchases will provide local automation, storage, print support, and connection to the major Departmental computer systems. As with the hardware purchases mentioned above, these acquisitions support the first phase of the AICIS project.

Audit of Contracted Advisory and Assistance Services

SENATOR LAUTENBERG: The Inspector General determined that approximately $66.4 million was spent by the Federal Aviation Administration for contractual activities, later determined to be consulting services, but which were not originally properly coded and reported by the FAA. Included in this miscoding of projects were several which were over $500,000. For the record, please describe those particular projects, which contractor received the funding, why these contracts were originally miscoded, and which office was responsible for the miscoding.

ANSWER: The following contractual activities over $500,000 were undertaken by FAA in FY 1988 and identified during our audit as meeting the OMB Circular A-120 definition of contracted advisory and assistance services (CAAS).

--DTFA01-86-Y-01011, Mod. 5, $1,750,000, MSI Services, Inc., to provide technical and management support for the Mode S equipment including specification development, proposal evaluation, production contract award, design reviews/tracking, integration/system testing, sensor delivery, installation, and acceptance.

--DTFA01-86-Y-01010, Mod. 5, $942,974, MSI Services, Inc., to provide technical and management support services for the Microwave Landing System (MLS) including documentation, acquisition, siting, maintenance and logistics, training, system improvement, and information program development and implementation.

--DTFA01-86-Y-01010, Mod. 6, $542,610, MSI Services, Inc., to provide technical and management support services for the MLS including documentation, acquisition, siting, maintenance and logistics, training, system improvement, and information program development and implementation.

--DTFA01-84-C-00017, Mod. 43, $39,000,000, Martin Marietta Corp., to provide system engineering and integration for implementation of the National Airspace System.

--DTFA01-84-C-00001, Mod. 26, $20,146,529, The Mitre Corp., to support the (1) development of improved data link services, (2) development of the collision avoidance logic for the Traffic Alert and Collision Avoidance System, (3) improved surveillance and weather channel sensor and integration, (4) advanced MLS procedures, (5) management of the National Airspace System's Interfacility Communications System, and (6) Flight Service Automation System project.

--DTFA01-87-Y-01028, $1,030,800, TEM Associates, Inc., to provide technical and analytical support to FAA in its efforts to maintain required levels of automated data processing (ADP) service while upgrading or replacing all management information host computer facilities.

--DTFA01-88-Y-01045, $692,933, Fu Associates, Ltd., to independently identify valid safety indicators and develop the methodology for system implementation. This includes studying near midair collisions, doing a feasibility study and cost/benefit analysis concerning safety indicators, developing a safety indicator system, and operating and maintaining an ADP system for the safety indicator system.

FAA officials agreed with our determinations that the above contracts should have been coded as CAAS. The contractual activities were miscoded primarily because FAA's Logistics Service's contracting officers were not aware of the changes to OMB Circular A-120 from consulting services to CAAS.

SENATOR LAUTENBERG: Also, what steps has FAA taken to correct this problem, and specifically, in which office did or do these problems reside?

ANSWER: FAA is developing additional written guidance to employees emphasizing the requirements of the revised circular. This was a general problem in FAA's Logistics Service which should be corrected by the revised guidance and additional emphasis.

SENATOR LAUTENBERG: Within the Urban Mass Transportation Administration, the Inspector General identified $11.2 million of miscoded contractual support contracts. For those contracts over $400,000, please provide the name of the contractor involved, the amount of money involved, and why these projects were miscoded, and which office was responsible for the miscoding of the projects. Please identify the steps taken by UMTA to correct this problem.

ANSWER: The following contractual activities over $400,000 were undertaken by UMTA in FY 1988 and identified during our audit as meeting the definition of CAAS in OMB Circular A-120.

--DTUM60-88-C-41033, $1,429,879, Peat, Marwick, Main & Co., to (1) assess and develop local plans for transit capital installations, (2) collect data and review regional transportation goals, and (3) perform financial analysis of capital finance and operating requirements.

--DTUM60-88-C-41032, $450,000, Dynotrend, Inc., to (1) prepare a comprehensive review of all federally funded studies and state and local planning agencies regarding the reverse commute factor, (2) conduct interviews with UMTA officials on the reverse commute factor, (3) conduct studies and analyses of the commute factor, and (4) recommend strategies and policy steps to UMTA.

--DTUM60-86-C-71297, Mod. 3, $650,000, TRAAC International Consultants, to administer and implement the Private/Public Transportation Network and conduct analysis for program recommendations.

--DTUM60-86-C-71310, Mod. 4, $862,202, Fluor Daniel, Inc., to provide project management oversight by monitoring activities of the grantee, including interviews, document reviews, observations, examination of records and test data and analysis of information, and to assure UMTA that the grantee's project is efficiently and effectively implemented.

--DTUM60-86-C-71311, Mod. 6, $3,992,986, Hill International, Inc., to provide project management oversight by monitoring the grantee's project activities including interviews, document reviews, observations, examination of records and test data and analysis of information, to assure UMTA that the grantee's project is efficiently and effectively implemented.

UMTA officials did not concur with the audit finding and recommendations and stated in their response that the definition of CAAS given in OMB Circular A-120 is so general that it is subject to an unworkably wide range of interpretations. They believe that the circular does not require contracts to be classified as CAAS unless their major purpose is to (1) provide recommendations or conclusions on which a Federal policy decision will be based; (2) improve Federal managerial, administrative, or related systems; (3) provide management or professional support services to a Federal agency for the benefit of a Federal agency; or (4) provide engineering and technical services to a Federal agency, except as excluded by the attachment to the circular.

UMTA agreed that 17 of the 36 contracts questioned in the audit report should be classified as CAAS. Concerning the remaining 19 contracts, we recognize that the definition of CAAS contained in the circular is broad in nature and, therefore, is subject to differing interpretations. However, we reviewed our determinations in light of UMTA's response to the audit report and believe that our determinations are valid.

UMTA officials took exception to two types of contracts which we determined to be reportable as CAAS. First, they considered that project management oversight contracts, including the last two contracts listed above, are for engineering services related to construction and, therefore, are not subject to the circular under exclusion I.2. However, these contracts provide for monitoring the activities of grantees, which the circular specifically mentions as falling within the definition of CAAS, and not for contract management as stated by UMTA.

The officials also took exception to contracts which provide advisory and assistance services for the direct benefit of a third party, rather than for the benefit of a Federal agency. We believe, however, that the contractor in these instances is acting for UMTA in carrying out UMTA's statutory mission to provide technical assistance to state and local transit agencies. Therefore, the question of third party receipt of the services is not pertinent in these instances.

In view of the difference in our interpretations of the circular's definition of CAAS, we have provided OMB a copy of the audit report and supporting documentation and requested a ruling on the reportability of the contractual activities in question. The problems identified in the reporting of contract activities as CAAS stemmed from the different interpretations, primarily by the officials in the Contracts Division of the Office of Procurement and Third Party Contract Review, of the circular's definition. We have suspended further action on our recommendations pending the receipt of the ruling from OMB.

Lobbying Law

SENATOR LAUTENBERG: Public Law 101-121 requires the Inspector General to prepare an evaluation of DOT's compliance on the use of public funds for influence peddling and lobbying. This law became effective on December 23, 1989. To date, what has the Office of Inspector General found through its audit and investigative efforts in the area of public funds being used for peddling and lobbying.

ANSWER: The first report required by Public Law 101-121 is due in January 1991 with our budget submission. Within the IG community, we are discussing what needs to be done and how to test for compliance. We plan to start the audit during the third quarter of FY 1990. The audit will evaluate the Department's implementation of the law.

Major Procurement Warranties

SENATOR LAUTENBERG: Several years ago, the Appropriations Committee provided legislation that required the Coast Guard to include warranties for all its major purchases. As you know, the Department has been very slow in promulgating the necessary regulations. Does the Inspector General support the idea of warranties for Coast Guard procurement? Does the Inspector General support the idea of warranties for Federal Aviation Administration procurement? What were the problems and are the problems in the Department issuing necessary regulations for warranty requirement?

ANSWER: Part 1246 of the TAR mandates the use of warranties in the procurement of major systems by the USCG, unless a waiver is authorized. The use of warranties in major system acquisitions by Departmental Administrations other than the USCG is voluntary. We support the use of warranties for USCG and FAA major acquisitions, when they are determined to be cost effective. To determine cost effectiveness, a documented analysis must be performed that compares the benefits to be derived from the warranty with its acquisition and administrative costs.

The requirement for use of warranties was included in the DOT Appropriation and Related Agencies Act of 1986. OST subsequently developed draft regulations and entered into extensive coordination with OMB in August 1987. A Notice of Proposed Rule Making was published in the Federal Register in February 1988. Reconciliation of comments occurred in May 1988, with issuance of the final rule on August 10, 1988.

Budget Request

SENATOR LAUTENBERG: For the record, please provide your request to the Office of the Secretary for fiscal year 1991 funding, and the Office of Secretary's request that was sent to the Office of Management and Budget for FY 1991 funding?

ANSWER: Our request to OST was $33,968,000 and the request to OMB was $34,600,000. The increase between the OST and OMB requests was to fund the January 1991 pay raise of 3.5 percent and the Senior Executive Service pay raise.

SENATOR LAUTENBERG: How much of the Inspector General's resources are spent in reimbursing the DCAA for the work it performs? Provide the actual dollar amounts and the percent of the total IG resources for the years 1988, 1989, 1990 and projected for 1991.

ANSWER: The following dollar amounts, and the corresponding percentages of budgetary resources, were used to reimburse DCAA for the audit work performed for us.

	FY 1989 Actual	FY 1989 Actual	FY 1990 Projected	FY 1991 Projected
Amount (In Millions)	$1.52	$1.56	$2.44	$3.30
Percentage of Budgetary Resources	5.4%	5.3%	7.7%	9.7%

Status of Ongoing Work

SENATOR LAUTENBERG: Last year, the Inspector General reported that, as part of the President's Council on Integrity and Efficiency audit, the IG was currently reviewing the unliquidated balances in UMTA's "merged accounts." What is the status of your review, and what did you find?

ANSWER: The final audit report was issued on February 26, 1990. We found that the merged account balances represented valid obligations and were accurately reported to Treasury. However, $2.5 million of the $151.3 million of merged account balances represented funds that were not needed and should have been deobligated. These excess funds could have been deobligated earlier if regional offices made full and effective use of financial and grants management reports and worked more aggressively with grantees to deobligate the excess funds prior to grant closeout. During our review, action was taken by UMTA to deobligate $1.7 million of the $2.5 million identified as excess funds. The remaining $800,000 of excess funds was identified for closeout in the Administrator's semiannual memorandum to the regional offices. UMTA officials also agreed to implement improved procedures for monitoring the timely closeout of completed projects and the deobligation of unneeded funds.

SENATOR LAUTENBERG: This Committee in the FY 1990 appropriations bill allowed the use of one half of one percent of capital funds within the Urban Mass Transportation Administration to be used for oversight beyond construction management. Such oversight could include safety management oversight and also financial and auditing oversight. Does the Inspector General agree with this expanded use of capital construction dollars, and have there been any results to date based on this expanded authority?

ANSWER: We agree with the expanded use of the one-half of 1 percent of capital funds for oversight beyond construction management. The enabling legislation authorizing this expanded oversight was enacted in November 1989 and there have been no results to date. According to UMTA management officials, several initiatives have been taken to increase oversight based on the expanded authority contained in the legislation. UMTA has contracted for 33 triennial reviews of grantees in six regions. None of the reviews have been completed. UMTA is also in the process of contracting for the services of a certified public accounting firm on an as-needed basis to review financial activities of grantees. With respect to the expanded authority related to safety management oversight, initiatives are underway to (1) plan for the collection of statistical data on drug and alcohol use by transit authority employees, and (2) survey personnel security within the transit industry. We plan to evaluate UMTA's expanded oversight activities in an audit included in our FY 1991 Annual Audit Plan.

SENATOR LAUTENBERG: The Committee is still concerned regarding the large amount of unobligated deferred money within the facilities and equipment account of the Federal Aviation Administration. Has the Inspector General done any follow-up work in this particular area; specifically, has FAA been obligating the facilities and equipment funds within the five-year limit imposed by the authorizing legislation?

ANSWER: We have not performed an audit to determine whether FAA has obligated the facilities and equipment funds within the 5-year authorization limit. We will consider this audit for our FY 1991 Annual Audit Plan.

SENATOR LAUTENBERG: For the record, please update the chart contained on page 917 of Senate Hearing 101-285, relating to the NAS Plan cost/schedule audits in progress.

ANSWER: A copy of the updated chart is attached for your information.

NAS PLAN COST/SCHEDULE/AUDITS AS OF MAY 31, 1990
SUMMARY, ALL NAS PLAN PROJECTS

MAJOR CATEGORIES, NAS PLAN SYSTEMS/PROJECTS	# SYSTEMS / PROJECTS			TOTAL COST (MILLIONS)	AUDITS COMPLETED		AUDITS IN PROCESS		AUDITS PLANNED	
	TOTAL	ACTIVE	AUDITED		OIG	GAO	OIG	GAO	OIG	GAO
A. MAINTENANCE AND OPERATIONS SUPPORT SYSTEMS	18	17	9	$ 3,915	12	1	1	2	5	0
B. AIR TRAFFIC CONTROL (ATC) SYSTEMS - EN ROUTE SYSTEMS	16	13	6	6,487	1	10	0	3	2	2
C. ATC SYSTEMS - TERMINAL AUTOMATION SYSTEMS	17	11	6	915	6	2	2	2	0	0
D. ATC SYSTEMS - FLIGHT SERVICE + WEATHER SYSTEMS	13	8	5	1,172	4	6	0	0	0	0
E. GROUND-TO-AIR SYSTEMS	18	15	10	4,481	9	3	0	4	1	0
F. INTERFACILITY COMMUNICATIONS	9	5	3	683	4	1	0	1	0	0
SUBTOTALS	91	69	39	$ 17,653	36	23	3	12	8	2
NAS PLAN PART VII - OTHER CAPITAL NEEDS	24	23	2	8,250	1	0	1	0	1	0
NAS PLAN PART VIII - TRANSITION	11	11	3	975	0	1	0	2	0	0
GRAND TOTALS	126	103	44	$ 26,878	37	24	4	14	9	2

NOTE: NUMBER OF PROJECTS AND TOTAL COSTS ARE ACCORDING TO FAA'S SEPTEMBER 1989 NAS PLAN.

SENATOR LAUTENBERG: For last year's record questions, the Inspector General felt that, in many cases, FAA did not properly follow the A-109 process which contains recommendations to improve the process of acquiring major systems. What is the Inspector General's assessment of FAA's ability or inability to properly follow the A-109 process? What progress has the FAA made in this area? (Please elaborate)

ANSWER: FAA has made changes in its organizational structure which should assist the A-109 process. Major changes occurred during the recent FAA reorganization with the establishment of an Executive Director for Acquisition, who is responsible for program appraisal, acquisition policy and implementation, and the establishment of the Aviation System Acquisition Review Council. As part of this reorganization, the Independent Operational Test and Evaluations staff was transferred to this Executive Director. This office provides an independent assessment of the operational effectiveness of major system acquisitions and reports directly to the FAA Administrator prior to the full-scale production decision. Also, program management was consolidated under one Associate Administrator, raising the level of program management which enables the selection of more highly experienced individuals.

ST. LAWRENCE SEAWAY DEVELOPMENT CORPORATION

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

CORPORATION FINANCING STATUS

SENATOR LAUTENBERG: Please report on the findings of the Army Corps of Engineers' structural evaluation of the Eisenhower and Snell locks. Is the report now complete? What were its findings? What are its implications in terms of capital improvement costs for the Seaway in the future? Does the report recommend any major renovation to the locks? What might these major renovations cost?

ANSWER: The Corporation received Corps of Engineers' report on "Anchor Investigation at Eisenhower Lock" in July 1989. The report concluded that the anchors installed at both locks during 1967-69 appear to be in excellent condition and no further corrosion investigations are required at this time. The Corps, however, recommended that a detailed structural evaluation consisting of field investigations of existing concrete quality and structural analysis be performed in order to evaluate the internal structural integrity of the lock walls. Consequently, the Corporation entered into an Interagency Agreement with the Corps of Engineers in January 1990 to perform the recommended study. The total budget for the study is $570,000 ($400,000 in FY 90 and $170,000 in FY 91). The field work has been completed. Detailed engineering analysis will be completed in April 1991 and final report delivered to the Corporation in July 1991. The final report will assess the structural adequacy of the lock walls and recommend the possible needs for future major rehabilitation.

SENATOR LAUTENBERG: Your budget for capital projects for 1991 includes funding to upgrade the lock control electrical equipment. How old is the current equipment, and what are its inadequacies?

ANSWER: Most of the electrical controls at locks, such as operating consoles, switchgears, recess controls, etc., are over thirty years old. Our program is to update these controls with the latest electronic equipment as the old ones become obsolete.

SENATOR LAUTENBERG: Your capital budget for 1991 also includes funding for the construction of an auto shop. What amount of money will be needed for the construction of this auto shop? Why is it necessary? What costs are currently associated with the servicing of automobiles? Will the auto shop be staffed by Seaway personnel? Will all servicing of automobiles be executed in the automobile shop once it is constructed? Will SLS personnel have their personal automobiles serviced at the shop for little or no charge?

ANSWER: First of all, the terminology "New Auto Repair Shop" is a misnomer; it is in fact a heavy equipment and vehicle repair shop. The Corporation has 9 passenger vehicles, 30 trucks and 23 pieces of heavy equipment which all needed to be serviced and maintained periodically. The construction of the new shop budgeted for $349,000 is required to ensure that all applicable OSHA standards are met, essentially to eliminate air and noise pollution caused by the existing heavy equipment and vehicle repair shop in the Maintenance Building. The existing "Auto Shop" will be converted to a navigation aid maintenance or electrical/electronic maintenance shop. The Corporation has always performed the routine maintenance on Corporation's heavy equipment and vehicles by in-house personnel. The annual cost including labor and materials is approximately $120,000. The Corporation facilities do not service personal automobiles.

SENATOR LAUTENBERG: Please provide the cost of the individual projects in detail under the $1.524 million requested for capital projects for "replacement and improvements".

ANSWER:

Safety improvements	$ 10,000
New tile gages at Snell Lock	30,000
Upgrade of lock control electrical equipment	50,000
Replacement of starters for synchronous motors	50,000
Installation of sector light at Cat Island	10,000
Construction of fixed light no. 55	180,000
Construct vehicle and heavy equipment repair shop	349,000
Replacement of windows at control houses and center buildings	45,000
Training dike improvements	300,000
Grouting of cracks at bypass culvert at Snell Lock	500,000
	$1,524,000

SENATOR LAUTENBERG: What response system does the Seaway currently have in place for oil spills within the Seaway? What about chemical spills?

ANSWER: The Corporation's Emergency Response Plan was first updated in June 1989 and again in March 1990, both versions of which the Committee has been provided copies. The Plan was prepared to assist the Corporation in response to an oil spill, hazardous chemical spill and tour boat incident in the U.S. waters of the 100 - mile International Section of the St. Lawrence River.

SENATOR LAUTENBERG: Does the Corporation know at all times what chemicals are being transported through the Seaway? Do Seaway personnel or local authorities have the expertise to handle spills of all such chemicals?

ANSWER: Yes, whenever a vessel carrying hazardous chemical cargo enters our traffic control sectors, the approximate locations of the ship and its cargo are continuously tracked by the computer at Eisenhower Lock Vessel Traffic Control Center. As part of the Emergency Response Plan, Seaway operation and maintenance personnel, and local personnel from fire departments, rescue squads, sheriffs, state police emergency response units, etc. have been trained to perform the initial response to the oil and chemical spills. In the case of chemical spills, National Response Center in Washington, D.C. and U.S. Coast Guard Marine Safety office in Buffalo, N.Y. will be notified immediately for the advice of containment and clean-up of the substances.

SENATOR LAUTENBERG: Your annual report for 1988 notes that the volume of chemicals transiting the Seaway hit a record high. Are your response capabilities for potential chemical spills adequate to handle this growing cargo volume?

ANSWER: We believe we are capable of providing the initial response of the oil/chemical spills.

SENATOR LAUTENBERG: What response system is in place in the event of fires aboard vessels transiting the Seaway? What fire fighting authorities are expected to be available in the event of such a fire?

ANSWER: The Corporation's tug Robinson Bay and a Canadian Coast Guard cutter at Prescott, Ontario are all equipped with fire fighting facilities. In addition, local fire departments along the river will also be available in the event of such a fire.

SENATOR LAUTENBERG: Please provide a detailed record of accidents involving vessels in the Seaway. Please also provide all data available regarding oil spills, chemical spills, and fires on vessels transiting the Seaway. If possible, please compare the data from 1989 and 1990 with that for the two preceding fiscal years.

ANSWER: Attached is the record of vessel incidents in the Seaway for FY 1989 and FY 1990 to date. There was one incident - STELLANOVA on 06/30/89 involving fire in turbo charger. Fire was extinguished immediately without any injury and pollution. "LAKE ANNE" incident at Snell Lock on 07/26/89 involved a chemical (Xylene) spill of approximately 14,000 gallons in the Lock. The Corporation's Emergency Response Plan was activated for the expeditious containment and clean up of the spill.

Fiscal Year From October 1, 1988 thru September 30, 1989.

1988

10-01 Ziemia Chelminska - Minor damage to fenders at Ike.

10-02 Darya Kamal - Engine Problems

10-07 Galicia - Air-compressor - Mid Lake.

10-05 Paterson - O-Ring leak on fuel filter.

10-16 Penalara - Engine Failure, Main air starting valve.

10-30 Canadian Ranger - Generator problem, Faulty Governor.

11-11 Malinska - Lost Steering at Cat Island, Replaced follow up board on the steering mechanism.

11-12 Arcturus - Grounding, Canadian Sector

11-13 Akranes - Engine problem, Fresh water packing to main engine.

11-13 Winnipeg - Engine problem, Replaced a blown joint in the exhaust trucking.

11-15 Gimini - Fender Damage at Snell Lock.

11-19 Radnik - Steering Problem, Primary steering pump.

11-20 Astorga - Damage to windsock at Eisenhower.

11-23 Soren TH - Grounding, poor visibility, Canadian Sector, No pollution.

11-27 Adam E. Cornelius - Struck LB-242, Deadship in tow, Broke lens on Buoy. Broke Tow.

11-27 Prestegious - Struck wall entering Snell Lock.

11-27 Ziemia Gnieznelenska- Struck approach wall to Snell Lock. Extensive wall fender damagn due to Vertical steel fendering welded to the vessel.

12-11 Tug Nipigon - Engine problem Snell Lock, Pin dropped out causing the engine to slip link.

12-13 Ziemia Gnieznienska - Damaged Lock wall fendering at Eisenhower due Vertical steel fendering welded to the vessel.

1989

05-17 Ziemia Gnieznienska - Engine Problem

06-06 Federal Inger - Damaged coaming at Eisenhower lock, no vessel damage.

06-30 Stellandva = Fire in Turbo Charger

07-12 "PL" Moonlight Lady - Grounded in Pool Between Locks.

07-22 Mar Caterina - Damage to NO-2 Fender at Snell Lock.

07-26 Lake Anne = Chemical Spill above Snell Lock.

08-29 Pavel Vavilov - Damaged Downstream Guard Wall at Eisenhower Lock.

Fiscal Year From October 1, 1989 thru September 30, 1990.

1989

10-09 Loretta V - Struck Light-38 Damaging Light and Cell.

10-13 Elmglen - Damaged rubber fenders Snell Lock

10-22 Tug Salvage Monarch - Grounded East of Lighted Buoy 42 Refloated by "Tug Robinson Bay"

11-13 APJ Sushma - Damage to Vessels Super structure While entering Eisenhower Lock, No Lock Facility damage. Note Vessel was in Ballast Condition.

11-23 Ziemia Opolska - Damaged Upper Wall Monolith N-42 While entering Snell Lock.

11-23 Windoc - Vessel Lost Steering ability and made Hard contact with Lower wall at Snell causing cell damage.

11-27 Ketu - Touched bank at Light 47.

12-03 Ziemia Gnieznienska - Struck Upper Cell above Eisenhower Causing Extensive damage to the cell.

12-15 Empire State - Grounded, Leaving Ogdensburg.

1990

04-27 Malinska - Touched bank at Copelands cut Only minor vessel damage noted.

05-26 "Pleasure Craft" - PL struck Lighted Buoy 202 near Alexandria Bay New York (Double Fatality Accident).

06-22 New Shoreham II - Passenger Tour Boat Grounded at Cat Island Shoal. Only minor damage to vessel.

SENATOR LAUTENBERG: Please provide a detailed breakout of the $370,000 requested for "equipment".

ANSWER:

Office equipment	$ 15,000
Computer equipment	50,000
Lock performance recording system	20,000
Visibility data recording system	20,000
Replace oil boom equipment	50,000
Replace air compressors at locks	50,000
Replace gatelifter generators	150,000
PA System for gatelifter	15,000
	$370,000

SENATOR LAUTENBERG: What is the current status of the Seaway Development Corporation's borrowing authority? Is the $3.2 million recurring in 1989, 1990, and 1991 under the activity "Authority to Borrow" represent debt service? If not, what is this expenditure for? What is the current level of outstanding debt of the Corporation?

ANSWER: The Corporation has remaining unused borrowing authority of $3.2 million. This does not represent debt service, since it is not an expenditure. Public Law 97-369, dated December 18, 1982 cancelled the Corporation's obligation to repay borrowings. As a result, the Corporation has no outstanding debt.

SENATOR LAUTENBERG: In your obligation by object classification table on page 6 of your justification, you show a dramatic increase for equipment costs from 1989 to 1990, and then a dramatic decrease in 1991. Please explain these significant fluctuations in expenditures for equipment.

ANSWER: The major increase of capital equipment in FY 1990 is the "Repowering of Robinson Bay Tug" at $2,000,000, which is an atypical project. The FY 1991 capital equipment budget is back to the normal costs.

SENATOR LAUTENBERG: Last year, in citing your request for a $12.7 million program level, you noted that over and above your $11.8 million appropriation request, you would be realizing $900,000 from interest on retained earnings and other sources. What are these other sources of revenue, and please specify the amounts of such revenue available in 1991 by source.

ANSWER:

Interest on retained earnings	$869,000
Concession operation	379,000
Rental of Administration Building	67,000
Miscellaneous	85,000
	$1,400,000

SENATOR LAUTENBERG: What level of interest on retained earnings do you anticipate for FY 1991?

ANSWER: We expect to realize approximately $900,000 interest on retained earnings in FY 1991.

SENATOR LAUTENBERG: In last year's budget, $250,000 was included to monitor lock wall movements and groundwater pressure. Has this monitoring been concluded? What were the findings of this effort?

ANSWER: A contract of $103,480 has been awarded to install six additional piezometers and two computerized data loggers at both locks for the purpose of establishing an efficient and effective monitoring system for groundwater pressure in the backfill of the lock walls. An engineering contract for establishing a lock wall movement monitoring system is being negotiated. Both monitoring systems will be installed by October 1990. The regular monitoring program will then be initiated to provide any early warning of the structural deficiency.

SENATOR LAUTENBERG: What amount of toll revenue is being forgiven by the Corporation as well as the Canadians, as a result of the elimination of tolls on government aid food cargo? What volume of such cargo transits the Seaway each year?

ANSWER: Cargo toll revenue for the 1989 volume of government aid forgiven by Canada amounted to $142,594 Canadian funds. Since U.S. tolls are effectively eliminated by the rebate process, there is no real U.S. forgiveness of tolls for government aid cargo.

SENATOR LAUTENBERG: Once again, the administration intends to seek legislation that will return the Corporation to direct toll financing, rather than financing through annual appropriations. When was this legislation submitted to Congress, and what is its status?

ANSWER: In 1989, the administration did submit such a legislative proposal during the Fiscal Year 1990 appropriations process, which was not enacted. The administration has not, however, submitted such a proposal this year.

SENATOR LAUTENBERG: In last year's hearing record, the Corporation in citing deficiences resulting from its status as a directly appropriated activity, noted that financing through the appropriations process causes the Corporation to lose the ability to deposit retained earnings in a reserved fund to finance emergency repairs and capital improvements. What has been the history with unbudgeted emergency repairs in previous years? Has the Corporation encountered significant unanticipated repair costs in recent years that were not anticipated in the budget? Does the Corporation not set aside some funding in its budget each year for emergency repairs?

ANSWER: In previous years, retained earnings were used to fund emergency repairs. The Corporation used retained earnings for FY 1986 extraordinary lock repair. In recent years, the Corporation has not encountered significant unbudgeted repair costs. The Corporation's budget does not include funding for emergency repair.

SENATOR LAUTENBERG: Another problem cited by Corporation with being a directly appropriated account was that the Corporation "loses a built-in incentive to promote trade and traffic in order to generate additional toll receipts." Is the promoting of trade and traffic through the Seaway not one of the central missions of the Corporation? Is such an incentive necessary for the Corporation to promote trade and traffic through the Seaway? How would you quantify your level of effort in promoting trade and traffic through the Seaway as an appropriated account, versus the level of effort you would generate if you were allowed to retain your toll revenue?

ANSWER: The loss of incentive is in reference to the long term future and changes in Corporation management policy. The promotion of trade and traffic through the Seaway currently remains as one of our major programs second only to operation and maintenance of the locks. Being appropriated has not affected our level of effort.

SENATOR LAUTENBERG: Another problem cited by the Corporation with being a directly appropriated account is that across-the-board sequestration reductions could result in the deferral of capital improvements and maintenance. What capital improvements and maintenance have been deferred in previous years as a result of sequestration? Have these deferred maintenance projects been built into future year budgets?

ANSWER: Some of the deferred projects are listed below:

1. Miter gate jacking, pintle inspection and replacement.
2. Pavement improvements for parking lots and roadways.
3. Vessel traffic management system.

The first two projects have been accomplished in the past two years. The third project is included in the FY 1992-93 capital plan.

SENATOR LAUTENBERG: Please provide information on the 5-year capital plan for 1990 and future years. When was the plan last updated? As part of last year's testimony, you noted that the budget request was consistent with the 5-year plan. Is your budget request for 1991 consistent with the capital plan?

ANSWER: The Corporation's 5-year capital plan for 1990-1994 is attached. The 5-year plan is continuous and is updated each year for the next five years. It was last updated in December 1989. It will be updated for the years 1991 through 1995 within the next two months. The FY 1991 budget request is consistent with the current capital plan.

FIVE-YEAR CAPITAL PLAN - 1990-94
Prepared By
OFFICE OF ENGINEERING & PLANNING

ITEM	DESCRIPTION	1990	1991	1992	1993	1994	PROJECT COST (1990-94)
CAPITAL PROJECTS							
1	SAFETY IMPROVEMENTS	$15,000	$10,000		$10,000	$10,000	$45,000
2	STRUCTURAL/MECHANICAL IMPROVEMENTS/MODIFICATIONS						
	a. Replace Hatch Covers	$25,000					$25,000
	b. New Tile Gages at Snell Lock		$30,000				$30,000
3	ELECTRICAL IMPROVEMENTS/MODIFICATIONS						
	a. Upgrade of Lock Control Electrical Equipment	$50,000	$50,000	$50,000	$50,000	$100,000	$300,000
	b. Replace Starters for Synchronous Motors		$50,000				$50,000
	c. Improve Cable Trays at Both Locks			$50,000	$50,000		$100,000
	d. Replace Tunnel Lighting				$100,000		$100,000
	e. Upgrade Switchgear @ Maintenance				$240,000		$240,000
	f. Upgrade CCTV System @ Both Locks			$150,000			$150,000
4	NAVIGATION AIDS IMPROVEMENTS/MODIFICATIONS						
	a. Install Racon @ Seaway International Bridge	$6,000					$6,000
	b. Construction of Fixed Light No. 31	$140,000					$140,000
	c. Installation of Sector Light @ Cat Island		$10,000				$10,000
	d. Construction of Fixed Light No. 38		$180,000				$180,000
	e. Construction of Fixed Light No. 85			$150,000			$150,000
	f. Construction of Fixed Light No. 54				$150,000		$150,000
5	BUILDING IMPROVEMENTS/MODIFICATIONS						
	a. Upgrade Marine Base Shop Facilities	$55,000	$349,000	$350,000			$754,000
	b. Replace Windows @ Control Houses & Center Bldgs.		$45,000				$45,000
	c. Eisenhower Visitor Center Improvement	$75,000					$75,000
6	GROUNDS/PAVING IMPROVEMENTS						
	a. At Parking Lot, Maintenance/Marine Base					$125,000	$125,000
7	GROUTING OF CRACKS @ BYPASS CULVERT OF SNELL LOCK		$500,000				$500,000
8	TRAINING DIKE IMPROVEMENTS		$300,000				$300,000
10	MODIFICATIONS OF BAILY BRIDGE ACROSS SNELL LOCK			$100,000			$100,000
11	PRECISE NAVIGATION SYSTEM						
	a. Define System Requirements				$200,000		$200,000
	b. System Design & Procurement- Hardware & Software					$250,000	$250,000
12	ANCHORING OF DOWNSTREAM GATE MONOLITH, BOTH LOCKS				$750,000	$700,000	$1,450,000
13	UPGRADE VISIBILITY MEASUREMENT FACILITIES			$225,000			$225,000
14	DRYDOCK FACILITIES AT SNELL LOCK					$900,000	$900,000
15	VESSEL TRAFFIC MANAGEMENT SYSTEM			$150,000	$160,000		$310,000
16	ICE FORMATION AND DECAY SIMULATION MODEL			$125,000			$125,000
17	CARRY-OVER PROJECTS FROM PREVIOUS YEARS	$479,000					$479,000
	TOTAL — CAPITAL PROJECTS — 1990-94	$845,000	$1,524,000	$1,350,000	$1,710,000	$2,085,000	$7,514,000
	GRAND TOTAL - CAPITAL PROJECTS & EQUIPMENT, 1990-94	$2,924,000	$1,894,000	$2,100,000	$2,500,000	$2,600,000	$12,018,000

FIVE-YEAR CAPITAL PLAN - 1990-94
Prepared By
OFFICE OF ENGINEERING & PLANNING

ITEM	DESCRIPTION	1990	1991	1992	1993	1994	PROJECT COST (1990-94)
CAPITAL EQUIPMENT							
1	OFFICE EQUIPMENT	$15,000	$15,000		$40,000	$40,000	$110,000
2	COMPUTER EQUIPMENT	$50,000	$50,000	$100,000	$100,000	$50,000	$350,000
3	REPOWER TUG ROBINSON BAY	$2,000,000					$2,000,000
4	REPLACE HYDRAULIC PRESS	$14,000					$14,000
5	LOCK PERFORMANCE RECORDING SYSTEM		$20,000				$20,000
6	VISIBILITY DATA RECORDING SYSTEM		$20,000				$20,000
7	REPLACE/UPGRADE EMERGENCY RESPONSE EQUIPMENT		$50,000	$300,000		$50,000	$400,000
8	REPLACE AIR COMPRESSORS		$50,000				$50,000
9	REPLACE GATELIFTER GENERATORS		$150,000				$150,000
10	PUBLIC ADDRESS SYSTEM FOR GATELIFTER		$15,000				$15,000
11	REPLACE SCOW 2 BARGE			$250,000			$250,000
12	REPLACE TRUCKS				$75,000	$75,000	$150,000
13	UPGRADE MACHINE SHOP EQUIPMENT				$200,000	$200,000	$400,000
14	UPGRADE HYDROGRAPHIC SURVEYING EQUIPMENT			$100,000	$50,000		$150,000
15	REPLACE LIGHTED BUOYS				$75,000	$75,000	$150,000
16	REPLACE 50-TON LORAIN CRANE				$250,000		$250,000
17	REPLACE COMMUNICATION EQUIPMENT					$25,000	$25,000
	TOTAL — CAPITAL EQUIPMENT — 1990-94	$2,079,000	$370,000	$750,000	$790,000	$515,000	$4,504,000

SENATOR LAUTENBERG: What rehabilitation work was performed during the 1989-1990 winter shut-down? How much did this work cost?

ANSWER: This past winter the rehabilitation work was performed at Eisenhower Lock and included:

1. replacing the contact blocks on the miter ends of both leaves of the downstream miter gate,
2. restressing the miter gate diagonals for purposes of miter block alignment and to place strains in the diagonals within acceptable ranges,
3. made the necessary modifications to the upstream miter gate and recesses for jacking both leaves and jacked both and inspected the pintles/bushings, and
4. removed and replaced approximately 170 cu. yds. of concrete at the steps along the bottom of the north lock wall and at isolated areas within the filling and emptying culverts.

The associated cost was approximately $202,000.

SENATOR LAUTENBERG: Please provide a table detailing the toll rates by cargo type for vessels transiting the Seaway.

ANSWER:

	Montreal-Lake Ontario Section	Welland Canal Section
Bulk cargo	$0.93	$0.46
General cargo	2.25	0.74
Containerized cargo	0.93	0.46
Government aid cargo	0.00	0.00
Food grains	0.57	0.46
Feed grains	0.57	0.46

SENATOR LAUTENBERG: The toll rates and the percentage of toll revenue divided between the United States and Canada is negotiated every two years. Please update us on the status of these negotiations. When are these figures expected to be renegotiated? When were they last negotiated, and what changes were made from prior rates and the prior percentage distribution between the two countries?

ANSWER: As a matter of practice the two Seaway entities meet annually to discuss toll rates, revenues and tariff changes. Meetings are at the request and timing of either agency with the next such meeting scheduled for July 12, 1990. The last major change resulting from annual discussions was during December of 1988. At that time the revenue split was adjusted to 75% Canada, 25% U.S.; a 4.5% increase was agreed to for 1989 and 1990; tolls on government aid cargo were eliminated; and tolls on lumber products were reduced from the general cargo category to the bulk category. Due to the elimination of U.S. tolls through the rebate process, the Canadians in effect receive all of the toll revenues actually retained regardless of the revenue split for the Montreal-Lake Ontario Section.

SENATOR LAUTENBERG: What effect might the failure of all Canadian provinces to adopt the Meech Lake Accord have on the Corporation's relationship with the Canadian authorities?

ANSWER: Four of the Seaway's seven locks are in the Province of Quebec, so the legal status of Quebec vis-a-vis Canada as a country theoretically could have an effect on the international agreements and administrative arrangements under which the Seaway now is jointly operated by Canada and the United States. At this time, however, we have no reason to believe that the legal status of Quebec will change in a way that would produce such an effect.

SENATOR LAUTENBERG: What is the status of negotiations with the unionized work force of the Corporation? We understand that a major contract with much of the unionized work force is up for renewal. Will the outcome of these salary negotiations affect in any way the appropriations requirements for the Corporation? If so, how?

ANSWER: The Corporation's current contract with AFGE Local 1968 expires on September 15, 1990. This agreement covers approximately 125 employees, including 90 blue-collar workers eligible to negotiate pay and health insurance benefits. Union and management have begun discussions on negotiation "ground rules", and actual negotiations should begin in July. Estimated increases for salaries/insurance premiums have been projected in current budget proposals.

SENATOR LAUTENBERG: Please provide the status of the membership of the advisory board. Are any vacancies anticipated in 1990 or 1991? Have any appointments been made recently?

ANSWER: By its enabling Act, the Corporation is authorized five advisory board members. There are no vacancies and none anticipated in 1990 or 1991. The most recent appointment was made in 1988.

SENATOR LAUTENBERG: What is anticipated to be the dredging requirements for 1990 and 1991? What expenditures are associated with dredging efforts in the Seaway?

ANSWER: The Corporation plans to perform a total of approximately 28,000 cubic yards of maintenance dredging in the intermedial pool and lock approaches in FY 1990 and 1991. The estimated cost for each year is $100,000.

SENATOR LAUTENBERG: How long was the Seaway closed to traffic during the winter months of 1989-90? How does this compare to the length of closings in the three preceding years? Are there any efforts being made to shorten the winter closing period? Is there reason to believe that traffic would increase with a shorter winter closing?

ANSWER: The Seaway was closed to operations from December 24, 1989 through March 27, 1990; a period of 94 days. The closed period for the three previous years was: 1988-89, 96 days; 1987-88, 92 days; 1986-87, 93 days. The length of the shipping season is frequently discussed between the Seaway entities with the primary considerations being weather conditions, traffic demand, and winter maintenance contracts. Over the next few years extensive work on the Canadian Welland Canal will dictate the length of the winter closing period. Past studies on traffic from an extended season indicated little more than a spreading out of traditional shipping volume over a longer season rather than surge of new traffic. The issue will no doubt be reviewed in the future once rehabilitation work is completed.

SENATOR LAUTENBERG: Under what circumstances does the Seaway Corporation call upon the services of the Coast Guard? How often was the Coast Guard utilized to assist the Corporation's efforts in 1989 and in 1990 to date?

ANSWER: The Coast Guard Services are required at varying times for the following reasons.

a. When there's a question on whether a vessel is seaworthy or not.
b. When considerable damage is done to the Lock facilities.
c. At the beginning and the end of the shipping season for ice breaker assistance.
d. For drug and alcohol related problems involving vessels personnel or pilots.
e. For oil spills or chemical spills.
f. Occasionally the U.S. Coast Guard will assist our Navigational Aid Division in retrieving buoys located on Eastern Lake Ontario.
g. When Pleasure Craft report that they are in distress.

Coast Guards assistance was utilized during the Xylene spill incident in July 1989. Their ice breaking assistance was requested during the closing of 1989 navigation season when Canadian Coast Guard was on strike.

SENATOR LAUTENBERG: Please describe your system of "incentive tolls". To whom are these beneficial toll rates offered, and for what purposes? What has been the effect of the incentive toll system on toll revenue? Has it substantially increased traffic that would otherwise be utilizing other modes of transportation?

ANSWER: Incentive tolls is not a specific program but rather an agreed policy between the Seaway entities to increase Seaway utilization. Incentives can take many forms and be very general or very specific. For example, we look upon the lumber toll reduction and elimination of government aid cargo tolls as incentives. More recently the Seaway entities have agreed to a trial program of reducing tolls on new cargoes and commodities which have seriously declined. The reduction for qualifying applicants will be effective from July 1, 1990 through September 30, 1990, a generally slack period, on a trial basis. Lumber cargo increased 21% in 1989 over 1988 following the toll reduction however more time is needed to determine if the increase will be sustained. Indications from shippers is that the increase is new business and not a shift from other routes.

SENATOR LAUTENBERG: What are the piloting requirements for vessels transiting the Seaway?

ANSWER: Piloting requirements for vessels transiting the Seaway.

1. Every foreign ship if over 300 gross registered tons.
2. The above applies to all Canadian and U.S. ships unless they are certified by pilotage stating Master has made 10 trips or more in the last 3 years.
3. If a laker goes out to sea to a foreign port and loads cargo, then comes back into the Seaway without stopping at a Canadian Port. A pilot would then be required.

SENATOR LAUTENBERG: What are maximum dimensions of vessels seeking to transit the Seaway? Have there been any plans or discussions or evaluations in regard to efforts to widen the Seaway to accommodate larger vessels? Have any cost estimates been projected for such widening efforts? Please provide such estimates for the record.

ANSWER: The maximum size vessel permitted to transit the Seaway is 76 ft. in beam width, 730 ft. in ship length, and 26 ft. in vessel draft. The Buffalo District Corps of Engineers, in their final feasibility report of St. Lawrence Seaway Additional Locks Study dated January 1987, indicated that the construction of two new larger locks at Massena and the associated channel dredging costs were $771,500,000 (October 1986 price level). The required Canadian investment was not included.

The Canadian Authority has planning documents on Seaway Expansion (twinning and/or larger locks) out to the year 2030. The Corporation will work with the Corps of Engineers in updating what the Corporation would have to do to accommodate expansion (if deemed viable) out to the year 2030. Once this is done, the two entities will prepare a joint planning document on future expansion. Also, in 1989, the Authority and the Corporation agreed to consider transiting vessels of slightly larger beam than Seaway regulations currently permit. The two entities are considering a demonstration project with eventual modification of the regulations if such a pilot program works.

SENATOR LAUTENBERG: What was the 1990 budget estimate for "travel and transportation"? What are you budgeting for travel and transportation in 1991?

ANSWER: The 1990 budget estimate for travel and transportation was $278,000. Our 1991 budget estimate is $290,000, a 4% increase for inflation.

SENATOR LAUTENBERG: On page 881 of last year's hearing record, you cite planned equipment purchases for 1990. Was all this equipment purchased, and were your cost estimates roughly correct?

ANSWER: We should purchase planned equipment by the end of the year. Equipment purchased to date compared to cost estimates are roughly correct.

SENATOR LAUTENBERG: Were all the "lands and structures" expenditures cited on page 881 of last year's hearing record executed? If not, why not? Were your cost estimates of these expenses roughly correct?

ANSWER: All the expenditures have not been accomplished. However, Corporation plans are to carry out all the projects budgeted. Costs to date are roughly correct on work performed.

SENATOR LAUTENBERG: What new automation and computing initiatives is the Corporation undergoing currently? What are planned for the future? At what cost?

ANSWER: The Transportation Computer Center is presently conducting an Office Automation Study for the Corporation. This study is expected by the end of July and will define our future computer plans. Preliminary discussion indicate that our present configuration will be upgraded using networking technology. We have asked that the proposal provide us with an Open System which will provide maximum flexibility. We have budgeted $50,000 in FY '91 and $100,000 in FY '92.

SENATOR LAUTENBERG: On page 12 and 13 of your annual report for 1988, you provide the statement of financial position for the Corporation, as well as the statement of changes in invested capital and the statement of operation and changes in cumulative results of operations for 1988 and 1987. Please provide these tables updated for 1989 in comparison to the two previous fiscal years.

ANSWER:

Statements of Financial Position
(in thousands of dollars)
(Calendar Year)

	1989	1988	1987
ASSETS			
CURRENT ASSETS:			
Cash..............................	$ 471	$ 273	$ 391
Unexpended appropriations (Note 7).	10,287	9,492	8,996
Time deposits in minority banks (Note 3)..........................	11,745	10,778	10,009
Tolls and other receivables (Note 4)	1,965	1,687	1,357
Inventories (Note 2)...............	324	324	324
Total current assets.............	24,792	22,554	21,077
PLANT, PROPERTY AND EQUIPMENT:			
Plant in service (Note 5)..........	142,921	140,720	138,908
Less accumulated depreciation......	49,385	47,262	45,217
Net plant in service............	93,536	93,458	93,691
Work in progress...................	813	1,603	1,183
Total plant, property and equipment	94,349	95,061	94,874
OTHER ASSETS			
Lock spare parts...................	570	532	415
Investment in Seaway International Bridge Corporation, Ltd. (Note 6).	7	7	7
Total other assets...............	577	539	422
Total assets.....................	$119,718	$118,154	$116,373
LIABILITIES AND EQUITY OF THE U.S. GOVERNMENT			
CURRENT LIABILITIES:			
Amount payable to the U.S. Treasury	$ 771	$ 976	$ 1,054
Accounts payable...................	667	698	460
Accrued leave......................	399	381	389
Accrued payroll....................	140	221	201
Other..............................	128	29	2
Deferred revenue...................	45	3	162
Total current liabilities.........	2,150	2,308	2,268
EQUITY OF THE U.S. GOVERNMENT:			
Invested capital..................	108,823	109,499	109,238

Unexpended appropriations (Note 7):			
Obligated	1,054	703	649
Unobligated	9,233	8,789	8,347
Cumulative results of operations	(1,542)	(3,145)	(4,129)
Total equity of the U.S. Government	$117,568	$115,846	$114,105
Total liabilities and equity of the U.S. Government	$119,718	$118,154	$116,373

Statement of Changes in Invested Capital
(in thousands of dollars)
(Calendar Year)

	1989	1988	1987
Invested capital at beginning of year	$109,499	$109,238	$109,976
Appropriations for plant, property and equipment	1,523	2,388	1,322
Appropriations for depreciation on plant in service	(2,199)	(2,127)	(2,060)
Invested capital at end of year	$108,823	$109,499	$109,238

Statements of Operations and Changes in Cumulative Results of Operations
(in thousands of dollars)
(Calendar Year)

	1989	1988	1987
REVENUES			
Appropriations expended:			
Operations	$ 9,057	$ 8,212	$ 4,489
Lock rehabilitation	-	-	1,972
Depreciation on plant in service	2,199	2,127	2,060
Other (Note 8)	1,631	1,178	977
Total revenues	12,887	11,517	9,498
EXPENSES			
Administrative expenses	1,932	1,720	1,743
Operations:			
Locks and marine	1,727	1,780	1,663
Maintenance and engineering	2,698	2,487	2,648
General and development	2,728	2,419	1,951
Depreciation on plant in service	2,199	2,127	2,060
Lock rehabilitation charges	-	-	1,972
Total expenses	11,284	10,533	12,037
Net income	1,603	984	(2,539)
Cumulative results of operations at beginning of year (Note 9)	(3,145)	(4,129)	(1,590)
Cumulative results of operations at end of year	$ (1,542)	$ (3,145)	$ (4,129)

SENATOR LAUTENBERG: What has been the level of accuracy in your projections of toll revenues in previous years? Please compare your toll revenue projections for 1987, 1988, and 1989 versus the actual toll receipts.

ANSWER:

Toll Revenue Projections versus Actual

(millions of dollars)

	Estimates	Actual
FY87	$ 9.80	$ 9.67
FY88	$10.40	$10.11
FY89	$ 9.99	$ 9.86

SENATOR LAUTENBERG: What level of toll revenue is anticipated for 1990? Has the traffic to date indicated that you will be fairly accurate in this projection? If not, why not?

ANSWER: The September 1989 budget cycle figure for FY 90 was $10.21 million. Our internal working forecast at this time is for $9.9 million. The budget cycle submission did not reflect the reduction of Canadian grain exports (and revenue) which occurred in the first quarter of FY90 (the last three months of the 1989 season).

SENATOR LAUTENBERG: If projections in the previous years were not accurate, to what do you attribute the inaccurate projections?

ANSWER: Past projections have been reasonably accurate. We tend to attempt conservative forecasts due to the many unknown factors which can impact system tonnage. The Seaway entities work closely to reconcile forecast estimates.

SENATOR LAUTENBERG: Please update the table on page 884 of last year's hearing record regarding the cost of your trade missions. What missions took place in 1990, and what missions might be anticipated for 1991? Please cite the successes you have enjoyed in terms of new Seaway traffic resulting from these missions.

ANSWER:

Trade Mission Costs

	1990 Preliminary	1989 Actual	1988 Actual
Reimbursement to U.S. Dept of Commerce	$ 60,000	$48,599	$86,438
Brochures	6,849	8,380	15,448
Shipping/Mail	3,009	5,183	7,938
Travel and other mission costs	65,494	17,975	46,694
Airfares	108,360*	25,182	43,833
Miscellaneous	24,471	15,984	19,202
Cost reimbursement from participants	(121,852)	(41,764)	(62,571)
Subtotal	146,331	79,539	156,982
SLSA Expenses	0	80,984	0

Total	146,331	160,523	156,982
SLSDC share	$146,331	$80,262	$156,982

* Includes service surcharges for Soviet Union group travel.

At this time, the Canadian Authority has been participating only every other year; however, from a recent talk with Authority President Stewart, we believe they now will participate every year, thereby making our share of the costs only 1/2 each year.

The 1990 mission included stops at Rotterdam, Netherlands; Hamburg and Bremen, West Germany; Vienna, Austria; Moscow and Leningrad in the Soviet Union. Preliminary 1991 mission planning indicates potential mission sites in Spain, Belgium, Poland, Sweden and England.

Mission participants consider mission achievements proprietary since they are in competition with each other. What is most critical, is for industry participants to pursue overseas contacts individually to develop new business, and maintain existing accounts using the Seaway. This is a long range process in terms of traffic development. Each mission group is surveyed upon return and the following is a paraphrased excerpt of responses received to the question on citing examples of mission results:

- A major Dutch insurance company is seeking real estate investment opportunities in port/city properties.
- Booked a shipment of steel to our port.
- Customers want only the highest quality grain and appear satisfied but concerned that we carry that message back.
- Met several existing customers and long term contacts which helps to maintain contacts, and exchange ideas for the future.
- Discussed potential new liner service with interested carriers.
- Made a new contact for chemical and liquid bulk movements.
- Vessel operator contact made concerning heavy lift machinery movement to China from the lakes.
- Port of Rotterdam representatives committed to a return visit to our port.
- Received critical comments about our port which will be taken care of immediately.
- New contacts made on movement of forest products, paper and aluminum castings.
- Several contacts made to pursue overseas representation of our port.
- Port of Bremen specialization with auto movement and port structure could be applied to our ports. Follow-up visits are planned.
- Met contact with lead on a heavy lift move inbound from the Red Sea.
- Used auto market for Eastern Europe is a major new export potential to pursue.
- Hungarian contacts in Austria have much to offer in terms of joint ventures, new vessel service, and steel products, import and export.

SENATOR LAUTENBERG: Please update the listing on page 886 regarding the personnel who went on such trade missions and their travel and related costs.

ANSWER:

1990		1989	
J. L. Emery	$6,413	J. L. Emery	$5,343
A. K. Blackman	$5,871	A. K. Blackman	$5,600
S. J. Beaudry	$6,056	S. J. Beaudry	$5,511
S. J. Rybicki	$6,816		
P. G. Weber	$4,845		

SENATOR LAUTENBERG: Please update the figures provided on page 887 of last year's hearing record regarding any draw downs of funds for non-routine or emergency use, as well as your revenue and commodity estimates for 1989, 1990, and 1991.

ANSWER: The Corporation has not incurred any draw downs of funds for non-routine or emergency use since FY1987.

	FY 1989 Actual	FY 1990 Estimate	FY 1991 Estimate
	($ and tons in millions)		
GRAIN	12.14	14.70	14.89
IRON ORE	12.10	10.47	10.61
COAL	0.84	0.77	0.78
OTHER BULK	9.74	9.06	9.18
GOVT AID	0.10	0.15	0.20
GENERAL	4.57	4.70	4.76
TOTAL TONS	39.49	39.86	40.42
TOLL REVENUE	$9.86	$10.21	$10.50
TOTAL REVENUE	$11.26	$11.61	$11.90

SENATOR LAUTENBERG: Please also update the figures on page 888 of last year's hearing record regarding tonnage by commodity and your estimated toll revenue and other revenues for future years.

ANSWER:

CALENDAR YEAR TONNAGE
(millions of tons and dollars)

	ACTUAL				ESTIMATED	
	1986	1987	1988	1989	1990	1991
GRAIN	16.35	18.32	15.47	11.47	14.78	14.97
COAL	0.61	0.23	0.76	0.80	0.78	0.79
IRON ORE	8.03	9.56	10.77	11.16	10.51	10.65
GENERAL	4.01	4.05	4.60	4.44	4.72	4.79
ALL OTHER	8.58	7.80	8.95	9.20	9.30	9.41
TOTAL	37.58	39.96	40.55	37.07	40.09	40.61
TOLLS REV.	$9.15	$9.53	$10.05	$9.40	$10.42	$10.55

ESTIMATED REVENUES FY91 THRU FY 95
(millions of $)

	TOLLS	OTHER	TOTAL
FY 91	$10.50	$ 1.40	$11.90
FY 92	$10.64	$ 1.60	$12.24
FY 93	$10.78	$ 1.60	$12.38
FY 94	$10.92	$ 1.70	$12.62
FY 95	$11.06	$ 1.70	$12.76

SENATOR LAUTENBERG: Please provide an update on the transfer of property of St. Vincent Island. Have all necessary transactions taken place?

ANSWER: The deed transferring the Cape Vincent property to the Corporation has been executed and forwarded to the Jefferson County clerk's office for recording. This completes the transfer of the property to the Corporation.

SENATOR LAUTENBERG: Please update the tables on page 889 and 890 of last year's hearing record regarding cargo tons by selected commodities and executed and planned replacement and improvement projects for 1989, 1990, and 1991.

ANSWER: The information follows:

MONTREAL - LAKE ONTARIO SECTION
SELECTED COMMODITIES
(Cargo Tons)
1979-1989

Selected Agricultural Commodities

YEAR	WHEAT	BARLEY	CORN	SOYBEANS	RYE, OATS & FLAXSEED
1979	10,015.187	3,198.940	7.088.033	1.456.072	662.855
1980	13,743,536	2,075,165	6,518,482	1,295,041	1,054,730
1981	11,922,095	2,949,190	5,075,126	1,542,048	836,476
1982	13,881,092	3,204,032	3,752,675	1,047,779	682,713
1983	15,609,328	3,706,243	2,767,967	300,790	626,191
1984	15,917,622	2,397,722	2,771,791	898,514	306,987
1985	11,502,016	686,590	2,508,872	736,590	375,643
1986	11,170,735	1,911,348	1,051,170	1,189,345	507,934
1987	12,559,195	1,422,006	2,117,099	1,104,387	516,194
1988	10,578,321	1,115,540	2,232,660	715,604	306,819
1989	7,040,862	1,229,637	2,049,926	676,398	280,723

Selected Mine and Manufactured Commodities

COAL & COKE	IRON ORE	STONE, SAND & GRAVEL	SALT	FUEL OIL	MANUFACTURED IRON & STEEL
2,820,401	14,817,154	404,569	833,813	2,326,932	3,107,744
1,626,942	11,005,222	217,941	782,430	1,563,431	2,084,713
2,527,798	12,926,853	65,929	1,134,948	1,838,507	2,905,186
1,834,463	7,430,414	36,264	714,901	1,002,035	2,790,012
988,212	10,280,210	55,729	878,535	936,121	2,896,137
1,246,010	11,421,521	124,294	818,931	745,378	4,453,231
1,409,374	8,679,210	259,048	657,494	558,770	3,603,221
1,477,031	8,026,080	288,157	874,520	641,156	3,548,802
888,188	9,557,376	231,658	928,559	481,049	3,614,403
2,179,663	10,810,682	432,411	1,027,682	879,438	4,316,733
2,049,067	11,185,264	448,647	1,377,273	569,627	4,186,116

YEAR	SELECT COMMODITIES TOTAL	% OF TOTAL SEAWAY
1979	46,731,700	84.5%
1980	41,967,633	84.9%
1981	43,724,156	86.5%
1982	36,376,380	85.0%
1983	39,045,463	86.7%
1984	41,102,001	86.5%
1985	30,976,836	83.0%
1986	30,686,278	81.7%
1987	33,420,114	83.6%
1988	34,595,473	85.3%
1989	31,093,540	83.9%

Replacement and improvements projects

Fiscal Year 1989	
Replace Hatch Covers	$ 26,660
Safety Improvements	10,961
Fender Boom Modifications	5,520
Upgrade of Lock Control Electrical Equipment	47,246
Conversion of Navigational Aids to Solar Power	55,684
Installation of Sector Light and Chimney Island	8,583
Construction of Fixed Light No. 47	114,957
Design to Repower Robinson Bay Tug	20,712
Improve Pavings - Guardwall Service Roads	149,388
Improve Existing Pavings Near Eisenhower Visitor Center	36,930
Improve Lafargeville Remote Radio Station	5,242
VTC Vessel Display System (System Requirement)	58,616
Replace VTC Radio Consoles	55,868
Replace Fender Boom #2 to Accommodate Maximum Ships	49,900
Marine Base Office and Shop Facilities	147,214
Eisenhower Visitor Center Improvements	12,915
New Tile Gage at Eisenhower Lock	22,285
Replace Generator on Work Boat	8,255
Parking Lot Expansion - Administration Building	66,347
Harbor Tugs (2)	51,166
Video Transmission Snell/Snug Harbor/Eisenhower	32,391
Replace Underground Fuel Storage Tanks	165,012
Relocation of Electrical Cables	19,469
Extend Dock Facilities at Marine Base	25,244
VTC Computerized Vessel Display Status	32,203
Other Improvements	19,842
	$1,248,610

Fiscal Year 1990	
Replace Hatch Covers	$ 25,000
Safety Improvements	15,000
Upgrade Lock Control Electrical Equipment	50,000
Construct Fixed Light No. 51	140,000
Install Racon Light at Seaway International Bridge	6,000
Design Vehicle and Heavy Equipment Repair Shop	55,000
Eisenhower Visitor Center Improvements	75,000
Paint Shop Construction	351,000
Cape Vincent Dock Improvements	36,000
Lafargeville Radio Station	19,000
Improvements to Philly Tugs	16,750
Design to Repower Robinson Bay Tug	15,000
Other Improvements	41,250
	845,000

Fiscal Year 1991	
Safety Improvements	$ 10,000
Upgrade Lock Control Electrical Equipment	50,000
Replace Starters for Synchronous Motors	50,000
New Tile Gages at Snell Lock	30,000
Installation of Sector Light at Cat Island	10,000
Construction of Light No. 55	180,000
Replace Windows of Control House and Center Buildings	45,000
Grouting of Cracks at Snell Lock	500,000
Construct Vehicle and Heavy Equipment Repair Shop	349,000
Training Dike Improvement	300,000
	$1,524,000

SENATOR LAUTENBERG: Please update the table at the bottom of page 891 of last year's hearing record regarding the cost of equipment purchases in 1988, 1989, and 1990.

ANSWER:

Equipment purchases

Fiscal year 1989	
Office Equipment	$ 12,163
Computer Equipment	39,529
Replace Horizon Telephone Switch	23,067
Replace Lighted Buoys	61,500
Replace Distance Meter	13,097
Replace Bucket Truck with Outriggers	36,599
Replace Grader	97,781
Replace Trucks	148,000
Racon Lights (2)	19,796
Replace SLS-31 Dump/Plow	54,386
Replace 1977 Front End Loader	62,161
Replace Squaring Shears	102,590
Boston Whaler	16,717
Oil Spill Contingency Plan	84,145
Other Equipment	6,338
	$777,869

Fiscal Year 1990	
Office Equipment	$ 15,000
Computer Equipment	50,000
Repower Robinson Bay Tug	2,000,000
Replace Hydraulic Press	14,000
	$2,079,000

Fiscal Year 1991	
Office Equipment	$ 15,000
Computer Equipment	50,000
Lock Performance Recording System	20,000
Visibility Data Recording System	20,000
Replace Oil Boom Equipment	50,000
Replace Air Compressors at Locks	50,000
Replace Gatelifter Generators	150,000
PA System for Gatelifter	15,000
	$370,000

SENATOR LAUTENBERG: Please provide an update of the table on page 892 of last year's hearing record (bottom) regarding operation and maintenance cost by activity.

ANSWER:

	1989 Actual	1990 Estimate	1991 Estimate
	(in thousands)		
Locks	$ 1,200	$ 1,350	$ 1,403
Marine	500	590	613
Maintenance and engineering	2,827	2,990	3,118
Operating support services, general expenses and development	2,700	2,840	2,953
Replacements and improvements	2,000	2,920	1,890
Administrative expenses	1,900	2,085	2,172
Total obligations	$11,127	$12,775	$12,149

SENATOR LAUTENBERG: Please provide an update of the material beginning on page 895 of last year's hearing record regarding outside contracts and proposed contracts for fiscal years 1989, 1990 and 1991.

ANSWER: The information follows:

OUTSIDE CONTRACTS & PROPOSED CONTRACTS FOR FY '89, '90 & '91

FY '89

Contract # DTSL55-	CONTRACTOR	AMOUNT	DESCRIPTION
88-C-C1757 Completed	Interface Services, Inc. E. Syracuse, NY	N-T-E $144,080	Remove & Dispose & Install Petroleum Tanks
88-C-C1858 Completed	H.Schickel Gen Con.,Inc. Malone, NY	Lump Sum $22,000	Place Steel Reinforce Section of Concrete cap, Snell Lock
88-C-C1875 Completed	The Journal of Commerce	$39,305	Furnish PIERS Subs (Port Import Export Report Services)
89-C-C0100 Completed	Avondale Industries,Inc. New Orleans, LA	N-T-E- $44,739	Furnish & Deliver Lock Spare Parts
89-A-C0158 Completed	U.S.C.G. Washington, DC	$61,500	Furnish & Deliver 5 Buoys
89-C-C0171 Completed	Hiawatha Utility Equip. Services Division Clay, NY	$36,599	Furnish & Deliver One (1) Bucket Truck Without Outriggers
89-C-C0182 Completed	Seaway Diving & Salvage Co., Inc. Clifton Park, NY	$9,500	Repair Damaged Air Curtain at Snell Lock

OUTSIDE CONTRACTS & PROPOSED CONTRACTS FOR FY '89, '90 & '91

FY '89

Contract # DTSL55-	CONTRACTOR	AMOUNT	DESCRIPTION
89-C-C0190 Completed	Schroon Lake Tractors,Inc. Gouverneur, NY	$97,781	Furnish & Deliver One John Deer Motor Grader
89-C-C0212 Active	Blancke Marine Westville, NJ	$18,066	Design/Specs. to Repower "Robinson Bay" tug.
89-A-C0322 Completed	U.S. Army Corps. of Engs. Washington, DC	N-T-E- $25,000	Supervise & Assist Anchor Investigation
82-A-C0502 Completed	Village of Massena	N-T-E- $10,796	Sample, Test & Reporting Functions re Water
89-C-C0521 Active	Wendel Engineers, P.C. Buffalo, NY	$69,434	A/E-Design of Blast Cleaning/Painting Facility
89-C-C0523 Completed	Perras Excavating, Inc. Massena, NY	N-T-E- $31,400	Construct Asphalt Overlay at Visitors Center, Eisenhower Lock
89-C-C0549 Active	Clarkson University Potsdam, NY	N-T-E- $41,500	Design & Furnish a Math Model Re Oil Spill

OUTSIDE CONTRACTS & PROPOSED CONTRACTS FOR
FY '89, '90 & '91

FY '89

Contract # DTSL55-	CONTRACTOR	AMOUNT	DESCRIPTION
89-C-C0568 Active	Price Waterhouse Washingtin, DC	N-T-E- $59,500	Design Specs. re Seaway Automated Information Systems (SAIS)
89-C-C0577 Completed	Navenco Marine, Inc. Valleyfield, Quebec	$30,785	Furnish & Deliver Oil Boom & Towing Floats
89-C-C0739 Completed	Luck Bros., Inc. Plattsburgh, NY	Lump Sum $61,000	Construct 2 Parking Areas at Administration Bldg.
89-C-C0762 Completed	Wilson's Heavy Equip.,Inc. Plattsburgh, NY	$62,161	Furnish & Deliver '89 Front End Loader w/Forks
89-C-C0784 Completed	Viereck Co. Columbia, Maryland	$102,590	Furnish & Deliver Hydraulic Squaring Shears
89-C-C0785 Completed	Dissen & Juhn Corp. Macedon, NY	Lump Sum $108,375	Construction Navigation Aid Light 47
89-C-C0816 Active	Martin O'Connell Assocs. Lancaster, PA	N-T-E- $88,700	Study re Winter Port Alternative
89-C-C0833 Active	Geo B. McKenna & Son Norwood, NY	N-T-E- $141,428	Repair Corporation Roadways

OUTSIDE CONTRACTS & PROPOSED CONTRACTS FOR
FY '89, '90 & '91

FY '90

Contract # DTSL55-	CONTRACTOR	AMOUNT	DESCRIPTION
89-A-C0373 Active	Village of Massena	N-T-E- $23,087	Sample, Test & Reporting Functions of Water
89-C-C0716 Active	The Journal of Commerce New York, NY	$42,056	Furnish Piers Sub (Port Import Export Report Services)
89-C-C0855 Active	Blue Cross-Blue Shield of Utica-Watertown Watertown, NY	N-T-E $400,000	Furnish Health & Vision Insurance to approx. 100 Corp. Employees
89-C-C0855 -A Active	Blue Cross-Blue Shield of Central New York Syracuse, NY	N-T-E $50,000	Furnish Dental Insurance to approx. 100 Corp. Employees
89-C-C0862 Active	Viewfinder Productions Potomac, MD	$59,867	Produce 10-12 Minute Videotape
90-N-C0149 Active	Otis Elevator Syracuse, NY	$220/MO	Monthly Inspection Otis Elevator @ Ad. Bldg.

OUTSIDE CONTRACTS & PROPOSED CONTRACTS FOR
FY '89, '90 & '91

FY '90

90-C-C0336 Completed	Fourth Coast Pollution Control Waddington, NY	$113,496	Conducted Chemical Spill Clean-Up
90-C-C0410 Active	Ransome Engine Power Ocean View, NJ	$595,600	Furnish & Deliver Main Engine/Generator Set for repowering of Robinson Bay Tug
90-C-C0412 Completed	Ultra Poly, Inc. Tacoma, WA	$49,198	Furnish & Deliver Marine Fender Material 55 Sheets of (UHMWP).
90-C-C0413 Active	Tropical Marine Timbers Co., Ltd Manotick, Ontario, CA	$66,234 U.S.FUNDS	Furnish & Deliver 304 EKKI Timbers
90-C-C0419 Completed	Bernard F. Reed, dba R & S Construction Co. Hermon, NY	$38,373	Remove & Replace Concrete @ Snell Lock (Monolith N42)
90-C-C0421 Active	Goldberg-Zoino & Associates Newton Upper Falls, MA	$103,480	Furnish & Install Piezometers @ Eisen & Snell Locks
90-A-C0444 Active	U.S. Army Corps of Engs. Chicago, IL	N-T-E $570,000	Structural Evaluation of Eisen & Snell Locks.

PROPOSED CONTRACTS FOR BALANCE OF FY '90

Sol. #DTSL55-90-R-C0366 re monitoring system for lock wall movements. Request for Proposal sent to A/E firm, Ludgate Engineering Corporation (Ranked #1 among the selected firms). They are scheduled to submit their Technical & Cost Proposals by close of business Friday, July 13, 1990. (P.R. Est. $28,450).

IFB #DTSL55-90-B-C0398 issued 3/12/90 with bid opening 4/16/90 to furnish & deliver two (2) propellers and one (1) nozzle for repowering of Robinson Bay Tug. Received four (4) bids---$88,444; $99,265; $110,170 and $159,768. Bids appear to be non-responsive. (P.R. Est. $85,000).

IFB #DTSL55-90-B-C0408 issued 2/20/90 with bid opening 3/23/90 to furnish SCR System for repowering of Robinson Bay Tug. Received one (1) bid---$260,625.50. Plan to convert from sealed bid to negotiations. (P.R. Est. $185,000).

IFB #DTSL55-90-B-C0411 issued 3/8/90 with bid opening 4/9/90 to furnish & deliver one main reduction gear for repowering of Robinson Bay Tug. Received two (2) bids--$98,390 & $101,321. Bids are being evaluated for "responsibility". Plan to convert from sealed bid to negotiations.(P.R. Est. $90,000).

IFB #DTSL55-90-B-C414 issued 3/22/90 with bid opening 4/23/90 to furnish & deliver one auxiliary generator for repowering of Robinson Bay Tug. Received no bids. Plan to purchase under small purchasing procedures.

IFB #DTSL55-90-B-C0591-A - Bid opening held 6/29/90 on pre-engineered bldg w/5-ton crane. Rec'd two (2) bids---$93,000 & $102,495. Bids being evaluated. (P.R. Est. $110,000).

PROPOSED CONTRACTS FOR BALANCE OF FY '90

IFB #DTSL55-90-B-C0592-A issued 6/18/90 with bid opening scheduled for 7/5/90 to furnish and deliver one grit blasting booth. (P.R. Est. $95,000).

IFB #DTSL55-90-B-C0646 issued 4/25/90 with bid opening 6/11/90 to furnish and deliver one spray paint booth. Rec'd 5 bids---$23,807.60, $29,823, $29,995, $30,791 & $34,500. Bids are being evaluated. (P.R. Est. $35,000). (Rec'd 2 late bids).

Sol. #DTSL55-90-R-C0812 - to conduct a pilot project to demonstrate the value of an EDI-based Seaway Automated Information System (SAIS). Published in CBD 6/29/90. Plan to issue RFP in 7/90. (P.R. Est. $100,000).

Contract #DTSL55-90-C-C0894 - Provide subscription furnishing on-line access to PIERS, including foreign shipper identification & container information, computer date for 1990/1991. Published in CBD 6/29/90. Plan to issue contract approx. 8/16/90 to The Journal of Commerce, in the amount of $44,579.

P.R. #90-N-C0892 - Planned Modification to Contract #DTSL55-89-C-C0568 - Price Waterhouse - Advisory services between SLSDC, the SAIS II Working Group & the selected Contractor for SAIS III. (P.R. Est. $5,000).

Waiting for P.R. re planned shipyard contract for repowering of Robinson Bay Tug.

Construction of Fixed Light 51 (Design not complete--Est. not available)

Installation of Insulation in Storage Bldg. in Maint. Area (Est. $30,000)

Improve Remote Radio Station, Lafargeville, Jefferson County, NY, (Est. $29,000) (Pending Survey)

PROPOSED CONTRACTS FOR FY '91

Computer Equipment (Est. $50,000)
Replace Oil Boom Equipment (Est. $50,000)
Replace Air Compressors @ Locks (Est. $50,000)
Replace Gatelifter Generators (Est. $150,000)

Construction of Fixed Light No. 55 (Est. $180,000)
Replace Windows of Control Houses and Center Bldgs. (Est. $45,000)
Training Dike Improvement (Est. $300,000)
Grouting of Cracks @ Snell Lock (Est. $500,000)
Construct Vehicle & Heavy Equipment Repair Shop (Est. $349,000)

Structural Evaluation of Lock Walls (Est. $170,000)

RELATED AGENCIES

ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD

STATEMENT OF STANLEY W. SMITH, CHAIR

Mr. Chairman, it is my pleasure to be here today on behalf of the Architectural and Transportation Barriers Compliance Board (Access Board) to present our goals and objectives for Fiscal Year 1991. These goals would be accomplished with the funding level proposed by President Bush in his Fiscal Year 1991 Budget of the United States Government.

The Board is requesting funding in the amount of $2.1 million, an increase of $164,000 over its FY 1990 adjusted appropriation of $1.936 million. We feel this increase is necessary to enable us to continue our public outreach activities to inform both the federal and public sectors of the requirements and benefits of accessible design and to expeditiously resolve consumer complaints filed pursuant to the Architectural Barriers Act of 1968, as amended (ABA).

In Fiscal 1991 the agency proposes to continue training activities relative to the Uniform Accessibility Standards (UFAS) to an even wider variety of audiences. This most successful program will also be enhanced by the development of formalized presentations using videotapes on general accessibility issues, and slide shows specifically focused on transit facility accessibility. The Board further plans to continue its outreach activities by holding public hearings and seminars as a part of its bi-monthly business meetings. Additionally, in FY 1991, the Board will continue to improve its record of timely ABA complaint resolution. All of these FY 1991 priorities are staff and travel intensive.

We feel the increase we are requesting is necessary to enable the Board to pursue its goals and objectives which will provide increased accessibility, and in turn increased independence, for Americans with disabilities. Further, our planned program of action will also take positive steps towards ensuring a future America appropriately designed to accommodate the access needs of all of its citizens. The Board has established the following Fiscal Year 1991 goals and objectives.

FISCAL YEAR 1991 GOALS AND OBJECTIVES

Research and Technical Assistance Programs

Continue to promote accessibility and usability of all facilities by all people.

- o Increase public awareness of methods to eliminate barriers confronting persons with disabilities by implementing appropriate public education efforts.
- o Maintain the MGRAD as a state-of-the-art accessibility document by revising appropriate sections based on prior year research outcomes and actively participating in the American National Standards Institute (ANSI) standards review and revision.

- Enhance current outreach and initiatives addressing the accessibility needs of individuals with sensory impairments.
- Pursue research and technical assistance programs focusing on critical transportation accessibility issues.

Compliance and Enforcement

Enhance accessibility in federally-funded facilities through complaint investigations and resolutions.

- Explore options for improving case processing procedures.
- Refine the Complaint Tracking System.
- Continue to improve contacts and cooperation with Federal agencies regarding compliance issues.

Legal Services

Expand the Board's legislative and regulatory programs.

- Provide legal guidance to the Board in setting policy and guidelines and to the agency in supporting administrative, personnel, and financial needs.
- Continue to review, revise and republish the agency's compliance and enforcement regulations.

Administrative Services

Improve the agency's administrative and management operations.

- Enhance personnel services provided to the board and staff.
- Enhance agency procurement policies and procedures.
- Revise and improve employee evaluation and awards programs.

FISCAL YEAR 1989 ACCOMPLISHMENTS

Among our most significant accomplishments are:

- continued reducing the backlog of complaint cases (269 cases closed in 1988; 317 cases closed in 1989);
- expanded on-site compliance visits (from 10 visits in 1988 to 25 visits in 1989);
- implemented the automated Complaint Tracking System for the production of status reports, follow-up ticklers and other compliance information;
- continued improvement in working relationships with Federal agencies to resolve barriers' complaints in an expeditious manner;
- held public forums in New Orleans, Tampa and Portland, Oregon;
- improved content and format of the Access America quarterly newsletter;

- prepared and presented education programs on UFAS and accessibility issues across the country;
- conducted an indepth review of the Minimum Guidelines and Requirements for Accessible Design (MGRAD);
- focused technical research on accessible/adaptable housing issues;
- responded to more than 3,000 requests for technical assistance and information with over 1,200 information packages and 21,000 copies of the Uniform Federal Accessibility Standard (UFAS) mailed to requestors;
- participated in the beginning stages of the ANSI review process;
- updated our product literature and library collections;
- began development of a computerized inquiry tracking system which, when completed, will permit the easy identification of types of inquiries and target audiences both for the efficient dissemination of existing publications and technical information and for the identification of areas where new publications or information resources are needed; and,
- began computerization of the technical services library.

The following technical assistance projects were funded in FY 1989:

- UFAS Retrofit Manual;
- Housing Accessibility Information System;
- Mobility Aid Securement Brochure;
- UFAS Checklist;
- Accessibility Product Collection;
- NIAE Student Design Program;
- Airport Access for Hearing Impaired Persons: Two Case Studies;

Other significant accomplishments include:

- Continued implementation of a Five-Year Workplan and identification of the appropriate resources necessary to implement the initiatives embodied in the plan;
- Coordination of federally-sponsored research on accessible design and a commitment to continue appropriate coordination of our efforts in the future;
- Continued outreach to the public to ensure that Board initiatives reflect the needs of those affected by ATBCB policies and programs; and,
- Continued active cooperation with the Council of American Building Officials, the private sector organization with responsibility for

interpreting ANSI A117.1, to develop consistent interpretations of technical requirements.

In addition to these projects, the Access Board has written and published the following brochures and technical papers:

- o Visual Alarms brochure;
- o Hands-on Architecture technical paper;
- o Transit Facility Design for People With Visual Impairments brochure; and,
- o Assistive Listening Systems brochure update and reprint.

SUMMARY

The ATBCB's Fiscal Year 1991 budget represents a continuation of the Board's efforts to achieve its programmatic and administrative goals while carefully focusing its limited resources. Our request does, however, address urgent priorities designed to promote access. Our highest priorities are to continue viable programs of research, technical assistance, public education, and compliance and enforcement.

Funds for our planned research and technical assistance contracts are vital to: (1) support the Board's focus on critical transportation accessibility issues; (2) initiate revisions to the Minimum Guidelines and Requirements for Accessible Design (MGRAD); (3) initiate development of accessible design training materials and programs which will eventually reduce the costs of providing the training and enable staff to reach a wider audience; (4) update and maintain the Board's comprehensive library collection; and, (5) develop and disseminate appropriate technical publications.

Specifically, FY 1991 funding in the amount of $2.1 million would allow the Board to:

- o Maintain its planned staffing levels through both FY 1990 and FY 1991. We are projecting an FTE usage of 28 at a cost of $1.335 million for personnel and benefits.
- o Fund research and technical assistance contracts to produce and distribute a videotape and slide shows on the UFAS requirements; create a computerized database on urban mass transportation services for people with disabilities throughout the country; sponsor research on wheelchair compatibility with transit vehicles and lifts; initiate research on accessibility related needs of visually and hearing impaired persons in transportation facilities; and, continue the accessible design competition.
- o Target 23 percent of requested travel funds to the training initiative and the remainder to Board travel for its public outreach effort at the Board's business meetings.

Increases in personnel, travel and printing costs, as well as certain other administrative costs, are critical to ensure that the Access Board can effectively respond to the volume of architectural barriers complaints filed with the agency, continue the timely processing of complaints, and fulfill selected public and private requests for technical assistance and training on UFAS. The additional funds will also enable the Board to continue its program of outreach at selected meetings of the Board, and to more fully implement other aspects of its planned program of public education and information.

Our Fiscal Year 1991 activities are designed to address the urgent needs of disabled Americans for equal access within the environment. We all agree that an accessible environment fosters hope and opportunities for all persons and eliminates the development of unnecessary and undesirable dependency. We all agree that a suitable, usable environment must be provided for Americans with disabilities. The ATBCB is committed to continuing its work towards a society unmarred by the barriers that discriminate against these individuals.

We believe the provision of an accessible and usable environment for disabled individuals is a vital issue and an essential element in fulfilling the Administration's commitment to promoting independence for persons with disabilities. The actions and programs of this Board will have a lasting impact on the future. By acting now to eliminate existing barriers and educating builders, architects, and designers, we reduce the burdens on future generations.

In Fiscal Year 1990 the Board was funded at $1.936 million. In Fiscal Year 1991, we are requesting $2.1 million. This is essential to enable the Access Board to make the Nation more accessible to all Americans, including its disabled citizens.

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

SENATOR LAUTENBERG: In your official statement, you note that you expect the Board to expand training activities relative to the uniform accessibility standards to an even wider variety of audiences. What audiences are currently being trained in regard to the UFAS, and what new audiences do you anticipate reaching in fiscal year 1991?

ANSWER: Until now, training has been provided primarily for staffs of federal agencies and has addressed the application of the Uniform Federal Accessibility Standards (UFAS) under the Architectural Barriers Act (ABA). An area with growing involvement is training for federal agencies and others on the standards in their relation to Section 504 of the Rehabilitation Act and how Section 504 and the ABA interrelate. Training regarding accessibility laws and standards, and general architectural accessibility design and construction has also been provided to advocacy groups, professional associations, building code officials, and other local government agencies upon request. It is in this area that we anticipate the greatest expansion. As part of this broader outreach program, we expect to be involved in the development and production of new training materials including technical assistance publications and manuals, workbooks, videos, and other audio-visual materials.

In addition, training will be expanded under the Americans With Disabilities Act (ADA) to reach a greater number of design professionals, developers and contractors, and plan reviewers and building officials - those people who have the power and responsibility to effect change in the built environment at the community level.

SENATOR LAUTENBERG: You note that you expect to enhance outreach initiatives in FY 1991. Please elaborate on your plans.

ANSWER: In addition to the plans described above, in FY 1991, the Access Board will continue several major initiatives to reach out to the public it is mandated to serve. Specifically, we will continue providing an opportunity for members of the public to address the Board at its public forums, widely disseminating our existing and new publications to targeted audiences, providing UFAS and accessibility training to federal agencies and other public and private entities, and offering toll-free telephone access to the public so they may contact our technical staff for answers to accessibility and design questions.

SENATOR LAUTENBERG: You have noted that transportation accessibility issues will continue to be a focus area for your research agenda in FY 1991 and 1992. Transportation issues were a focus area for your research activities in 1990 as well. What can you report to us on your research efforts on transportation issues in 1990? Have any of your studies been concluded, and if so, what were the results? What were the public policy implications of these studies? When do you expect those studies initiated in 1990 to be completed?

ANSWER: Fiscal Year 1990 (focus year three of the Board's 5-year research plan) targeted funding for Minimum Guidelines and Requirements for Accessible Design (MGRAD)/UFAS follow-up technical/research projects. The FY 1990 focus year projects and current status follow.

1. MGRAD/UFAS Accessibility Handbook. Status: in contract negotiation.
2. Parking and Passenger Loading Zones. Status: contract award anticipated for July 10, 1990.
3. Accessibility Standards for Children's Environments. Status: proposals received and under review by staff.

Each of these projects is for a 12-month duration. Results are anticipated one year following the award date. Therefore, the results of these FY 1990 projects will be available in late summer or fall of 1991. It is anticipated that research results of projects number 2 and 3 will be used to further refine and update the Board's Minimum Guidelines and Requirements for Accessible Design (MGRAD).

SENATOR LAUTENBERG: Please provide a summary of the "critical transportation accessibility issues" that you expect to research in 1991 and beyond.

ANSWER: As indicated by the requests the Board receives for technical assistance in the transportation area, the most critical issue is the need for people in the field to understand accessibility requirements, especially the application of the ABA to transportation facilities. Therefore, the major technical assistance project for FY 1991 is the development of a comprehensive training program geared toward personnel in the regional offices of the Urban Mass Transportation Administration (UMTA) and local transit agencies. By training the people who write specifications or check plans we can avoid costly mistakes which must be corrected later.

In the research area, one of the most critical issues which still needs study is securement of wheelchairs and other mobility aids on transit buses. While several transit agencies have developed systems which work for the majority of mobility aids, there is still no "universal" securement device suitable for use in fixed-route transit buses. The Access Board has been disseminating a technical paper on the subject for some time and is currently preparing to print a technical assistance brochure to help transit agencies reproduce the successful systems of others. The Board feels that adequate information exists and, therefore, does not support the position that people who use certain common mobility aids should be restricted or banned from using transit systems.

Another area which needs further elaboration is the development of specific requirements of persons with ambulatory or semi-ambulatory disabilities. In particular, hand-rail configuration, acceleration and jerk limits, information needs of persons with visual or hearing impairments, for example, are poorly defined.

We expect that the rulemaking process for the Board's supplemental MGRAD will identify many issues which need further research. It is expected that the comments from the public and other agencies will provide ample material to help define the Board's technical assistance and research priorities for years to come.

SENATOR LAUTENBERG: You cite as a goal for FY 1991 the improvement of the agency's administrative and management operations. What shortfalls do you currently find with your administrative and management operations?

ANSWER: We continually review our internal operations to ensure the agency's mission is addressed in an innovative, efficient and cost-effective manner. Nevertheless, we plan to develop an improved mechanism for publishing agency operating procedures and instructions in a concise, easily referenced manner. We anticipate that this method will further strengthen our system of internal controls to protect agency resources.

SENATOR LAUTENBERG: You note that you expect to improve the Board's procurement policies and procedures. What are the current procurement policies and how do you expect them to change in 1991?

ANSWER: Both the staff and Board have concentrated on developing well-defined procurement plans in advance of the fiscal year in which the procurements are made. In FY 1991, additional staff training in procurement is planned. Staff will also attend the Small Agency Council (SAC) Procurement Issues Committee to ensure we stay abreast of any changes in government procurement issues which may impact our operations. The SAC Committee was established to specifically address procurement issues of importance to small agencies such as the Access Board.

SENATOR LAUTENBERG: What number of on-site compliance visits do you expect for FY 1990? How does that compare to fiscal years 1988 and 1989? What number of compliance visits do you estimate you will make in 1991? Please feel free to provide a table.

ANSWER: Thus far this fiscal year seven (7) on-site compliance visits have been conducted by a staff architect, primarily to facilities within the metropolitan Washington, D.C. area. At this same rate, a total of 9-10 site visits would be performed in FY 1990. This figure is comparable to the 12 site visits done in FY 1989 and exceeds the five visits performed in 1988. Based on the past three years experience, it can be projected that the number of FY 1991 visits would be about ten (10).

SENATOR LAUTENBERG: Has any particular area of non-compliance been targeted for on-site visits? If so, which area, and why was this area chosen?

ANSWER: Site visits are scheduled only when the case involves either contradictory or very complicated information about the barrier(s) at issue. In these instances, one of the staff architects and/or compliance specialists visit the facility to determine the actual accessibility circumstances and assess the violations and possible design solutions. When there is agreement in the information provided by various respondents, corrective action is usually achieved without the need for a site visit.

SENATOR LAUTENBERG: Is the 5-year work plan updated or revised annually, or is it expected to expire on a certain date? If so, where does the Board currently sit in the 5-year scheme for implementing this plan?

ANSWER: Each year the Board's work plan is reviewed in detail and revised as needed to ensure responsiveness to the changing needs of the public we are mandated to serve. In January of this year, for instance, the Access Board's mission statement and goals and objectives were revised to guide its planning and activities for the coming years. The revised mission statement now is "Enhance the quality of life by ensuring accessibility and broadening the public awareness that access makes economic and practical sense for all", reflecting the Board's commitment to increasing accessibility through heightened public awareness.

SENATOR LAUTENBERG: In your testimony, you note that part of the work plan involved the identification of the appropriate resources necessary to implement the initiatives embodied in the plan. By the "appropriate resources", are you referencing only appropriations made by this Committee to the Board, or the resources of other agencies and/or private resources?

ANSWER: By this we mean that we constantly seek ways in which to expand the impact of our limited resources by engaging in joint projects with other federal agencies.

SENATOR LAUTENBERG: With what other federal agencies has the Board coordinated to conduct research on accessibility issues? Please provide a listing of those agencies and the research projects, as well as the dollar commitments for the research projects made by the Board and the other federal agency or agencies.

ANSWER: The Access Board has undertaken cooperative technical assistance and research projects with the following agencies:

- Department of Treasury -- conduct and evaluate a TDD relay service for federal agencies (1985 - 1989). The Board contributed $25,000 each year to the joint project. The Department of Treasury furnished facilities, administration and other in-kind support. The project's success prompted Congress to create a permanent relay service, and the General Services Administration assumed responsibility for it in March 1989.
- Department of Transportation -- conduct and evaluate a demonstration of TDD access in airports (1985 - 1990). The Board transferred $85,000 to the Department of Transportation through an interagency agreement to conduct a demonstration project to provide access to TDD users in Baltimore-Washington and Miami International airports. The Department of Transportation provided contract administration and oversight services. The Board is in the process of publishing a case-study report on both projects to assist other airports in implementing similar projects.
- Urban Mass Transportation Administration -- provide a technical paper and annotated bibliography on lifts and securement (1986 - 1987). In 1987 the Board published a technical paper, Lifts and Wheelchair Securement, which was the result of an interagency agreement in the amount of $23,000 with the Urban Mass Transportation Administration (UMTA) as part of an UMTA-sponsored project to develop advisory guidelines for lifts and wheelchair securement on buses and paratransit vehicles. The annotated bibliography program developed as part of this project was later modified by Board staff to accommodate the Board's computerized technical library.
- National Institute of Disability and Rehabilitation Research (NIDRR), Department of Education
  - Develop "Toward an Accessible Environment: Effective Research" (1988). NIDRR contributed $10,000, and the Board provided staff and administration to contract for editing and printing services.
  - Act as a technical advisor to NIDRR sponsored Accessible Housing Research & Training Center, North Carolina State University (1988 - 1993)

- US Fire Administration -- conduct a research and demonstration "Fire-Safe Accessible House" project (1989 - 1990). The U.S. Fire Administration contributed $149,935 for the first year and will provide $80,000 for a modification and extension of the project. The Access Board has provided contract oversight and administration and will contribute funds for the extension and modification.

In addition to working with other federal agencies, the Access Board this year co-sponsored a project with a division of the National Academy of Sciences' National Research Council:

- Transportation Research Board (TRB) -- conduct a workshop and develop a circular (technical paper) on the state-of-the-art in airport design to meet the needs of travelers with disabilities (1990). The Access Board provided $10,000 to ensure appropriate participation of professionals and consumers with disabilities. TRB provided administration and logistic support for conduct of the workshop and will prepare, edit, print and distribute the circular, including Board comments.

SENATOR LAUTENBERG: On page 2 of your justification, you note that $18,154 lapsed at the end of FY 1989. The official budget submission of the President notes that $20,000 lapsed at the end of FY 1989. Which figure is correct? While that amount is below the sum that lapsed at the end of FY 1988, it is considerably above the dollars lapsed for the preceding fiscal years. Why was there such a sizeable lapse of funds at the end of FY 1988 and 1989, compared to years prior to 1988?

ANSWER: We believe the difference between our justification and the budget submission is one of rounding. In FY 1988, the sizeable lapse of funds was due primarily to unanticipated staffing vacancies which occurred late in the fiscal year. The former Executive Director resigned at the end of the third quarter of FY 1988. During the recruitment period for this vacancy, the position was temporarily filled through a non-reimbursable detail arrangement with the Veterans Administration. Also, in August 1988, the former General Counsel resigned, and existing staff temporarily filled that position during the recruitment period which extended into the next fiscal year as well.

In FY 1989, $20,000 lapsed as a result of moving the Board's July meeting to August and cancelling its September meeting. This action was taken in response to advice from OMB that approximately $21,000 of our appropriation must be set-aside for possible cancellation pending Congressional action on President Bush's budget program which proposed cancelling 1.099% of the 1989 appropriations for domestic discretionary residual programs.

SENATOR LAUTENBERG: While the Board is seeking an appropriation increase of 8.5%, there are certain program areas that are seeking a considerably larger percentage increase. For example, you anticipate a 14% increase for travel. How will these additional travel funds be used, and for what purposes?

ANSWER: The increase is necessary for us to carry out our planned program of UFAS and accessibility training and to meet the growing demand for this service. In addition, travel funds are necessary to enable Board members and staff to address national level constituency organizations. Both initiatives are a part of our planned outreach program.

SENATOR LAUTENBERG: Please update for FY 1989 and 1990 the travel data found on page 944 of last year's hearing record.

ANSWER: The chart below contains the requested data for out of town staff travel for Fiscal Years 1989 and 1990 to date. Data provided for Fiscal Year 1989 updates previously provided information.

FY 1989 Site	Purpose
Stamford, CT	Panelist and presenter at the Fair Housing Conference
Antonio, TX	Presentations at Bureau of Land Management (BLM) Safety & Health Conference
Orlando, FL	Panelist and presenter at American Public Transit Association (APTA) meeting
Pittsburgh, PA	Panelist and presenter at APTA meeting
Chicago, IL	Attended meeting and delivered description of the ATBCB to American Institute of Architects (AIA)/Building Performance and Regulations Committee (BPR)
Kingston, NY	Led training session for Association of Town Supervisors
New York, NY	Participated in jury for Architecture Student Design Project
Austin, TX	Led training session for Texas Department of Human Services
New York, NY	Worked with the National Institute of Architectural Education-Student Design Project
Denver, CO	Conducted UFAS/ABA training for the National Park Service

FY 1990 Site	Purpose
San Francisco, CA	Attend Association of Collegiate Schools of Architecture (ACSA) Annual Meeting
Tucson, AZ	Meeting with the National Park Service
Amelia Island, FL	Meeting with the National Park Service
Kansas City, MO	UFAS training - Federal Executive Board

Longboat Key, FL	Participate in 57th Board for the Coordination of Model Codes (BCMC) Conference
Houston, TX	Board Meeting and Public Forum
Annapolis, MD	Board Meeting and Annual Planning Retreat
Gallup, NM	UFAS Training - Bureau of Indian Affairs
Phoenix, AZ	Participate in Airport Conference Sponsored by the Transportation Research Board
Raleigh, NC	Fair Housing Institute
Miami, FL	Participate in AARP/Stein Gerontological Institute (SGI) Conference
Chicago, IL	Board Meeting and Public Forum
New York, NY	Participate in AIA Architects in Education Committee Meeting

SENATOR LAUTENBERG: In last year's hearing record, you noted that the agency's estimate for travel assumed that all public Board members would attend all planned Board and Committee meetings during the year. What was the actual attendance record at Board and committee meetings by Board members in FY 1990 to date? Does your budget request for travel in FY 1991 again anticipate 100 percent attendance at all Board and committee meetings by Board members? If so, why?

ANSWER: Our FY 1991 travel budget also assumes 100% attendance by public Board members. Since Board meeting dates are established well in advance and not usually changed, members are able to adjust anticipate adhering to our schedule and therefore, assume all members will attend planned meetings. From experience we have found that budgeting for 100% attendance ensures adequate funds are available to pay the cost of attendants for Board members with disabilities who require this accommodation while on travel.

SENATOR LAUTENBERG: Please update the figures provided on page 947 of last year's hearing record regarding the attendance rate at Board meetings through FY 1989 and 1990 to date.

ANSWER: The attendance rates at Board meetings during FY 1989 and 1990 to date are:

May 1989 - May 1990
Members and Federal Liaison Staff Present

	Federal Members	Liaisons	Public Members
May 1989	1	5	11
August 1989	3	6	11
November 1989	1	2	10
January 1990	4	5	12
March 1990	3	10	11
May 1990	8	9	10

SENATOR LAUTENBERG: You are requesting a 54% increase for printing and reproduction expenses in 1991. What will these additional printing expenditures be used for?

ANSWER: In FY 1991, the Board will revise MGRAD, its compliance and enforcement regulations, reprint existing publications, and print newly developed ones. Since requests for Access Board publications continues to increase, we are projecting a corresponding increase in our estimates for reprint quantities.

SENATOR LAUTENBERG: You are also seeking a 100% increase for equipment costs. What equipment acquisitions do you anticipate in FY 1991 that will necessitate a 100% funding increase?

ANSWER: When the Access Board began automating in FY 1986, a limited number of relatively inexpensive personal computers were purchased. During the next few years, as our automation needs became significantly more sophisticated, the new personal computers which were purchased were necessarily more sophisticated as well to meet our changing needs. Now, as the older equipment begins to fail, it is our experience that it is far more cost-effective to replace those items than it is to repair or maintain them under service agreements. Therefore, in FY 1991 we anticipate replacing most of the older computers with new, upgraded machines.

SENATOR LAUTENBERG: What progress has been made in 1989 and 1990 to date toward further reducing the backlog of complaint cases before the Board? Based on your performance to date in FY 1990, what number of cases do you anticipate will have closed by the end of the fiscal year? How does that compare to previous fiscal years?

ANSWER: In FY 1988, 200 new cases were opened and 269 cases were closed; in FY 1989, 176 complaints were opened and 317 were closed. To date, in FY 1990, 132 cases have been opened while 156 have been closed so it appears that we are continuing the recent trend of resolving more cases than are being opened, thus continuing to reduce the backlog of cases accumulated in the past.

SENATOR LAUTENBERG: Please update the table on page 950 of last year's hearing record regarding the status of complaints.

ANSWER: The information follows.

SENATOR LAUTENBERG: Roughly how many days on average does it currently take for the resolution of an individual complaint? What is your goal for the number of days to resolve complaints? Do you think the regulatory expectation that you be able to resolve complaints within 180 days is reasonable? What percentage of your complaints in 1989 were resolved within 180 days? How many do you anticipate will be resolved within 180 days in FY 1990 and 1991?

ANSWER: We do not compile data on the number of cases resolved within 180 days, but information on the percent of active cases that have been open for 180 days or more is available. As of July 5, 1990, 45 (51%) of our 88 open, unresolved cases have been open for 180 days or longer. It is significant, however, that in all but 12 cases which are undergoing legal review and analysis, there has been a recent contact date. Thus we are diligently pursuing our investigation of each of these complaints with the intent of resolving them as soon as possible.

Obviously, our goal is to resolve successfully all complaints in the shortest time possible. However, this is often complicated not only by the excessive demands placed on our small staff, at times, but also by our reliance on other federal agencies and respondents with competing demands and priorities to provide, in a timely way the information needed to continue our investigations. The difficulty with the 180 day time frame in our regulations is that it does not accommodate the lapse of time awaiting response from other entities which is beyond the control of the Board's compliance and enforcement unit.

SENATOR LAUTENBERG: What is the "ANSI review process?" Please describe the UFAS retrofit manual. What is the "UFAS checklist?"

ANSWER: The American National Standards Institute, Inc., a federation of trade associations, technical societies, professional groups, and consumer organizations, coordinates voluntary standards for a great variety of goods and services. The American National Standard for buildings and facilities - providing accessibility and usability for physically handicapped people (ANSI A117.1), the technical provisions which are used widely as part of local or state accessibility regulations, is one of approximately 8000 standards approved by ANSI. On a regular five-year cycle, the ANSI A117 Committee meets to review and act on proposals for changes and additions or deletions to the A117.1 document. The proposals are first reviewed and discussed by the appropriate task force which follows the same consensus process as the Committee. As a member organization, the ATBCB actively participates in this process. The Board has also coordinated the timing of its research efforts to provide information for the ANSI revision process.

The UFAS retrofit manual, is intended to serve as a regulations guidebook for designers, builders, and users of facilities where alterations are being made to existing buildings and facilities, including historic structures. The manual will present the

STATUS OF COMPLAINTS BY FISCAL YEAR RECEIVED (FY 1977 - FY 1990)   REPORT DATE: July 05, 1990

	COMPLAINTS RECEIVED					COMPLAINTS CLOSED					
								CLOSED FOR:			
FY	TOTAL	% CHANGE FROM PREVIOUS FY	UNDER INVESTI-GATION	MONITORING CORRECTIVE ACTION	INTENT TO CLOSE LETTER SENT	TOTAL	% TOTAL RECEIVED	CORRECTIVE ACTION	NO JURIS-DICTION	NO VIOLATION	TOTAL CLOSED BY FY CLOSED
1977	100		0	0	0	100	100.%	50	44	6	49
1978	155	55.%	0	0	0	155	100.%	60	83	12	141
1979	176	13.5%	0	0	0	176	100.%	92	78	6	175
1980	160	-9.1%	0	0	0	160	100.%	63	86	11	137
1981	106	-33.8%	0	0	0	106	100.%	39	62	5	96
1982	119	12.3%	0	0	0	119	100.%	58	52	9	73
1983	129	8.4%	0	0	0	129	100.%	60	55	14	123
1984	233	80.6%	1	5	1	226	97.%	81	135	10	96
1985	249	6.9%	0	7	0	242	97.2%	77	148	17	236
1986	91	-63.5%	3	3	2	83	91.2%	28	49	6	101
1987	217	138.5%	3	9	1	204	94.%	99	86	19	102
1988	200	-7.8%	5	14	1	180	90.%	48	111	21	266
1989	176	-12.%	20	20	3	133	75.6%	35	90	8	317
1990	132		56	8	13	55	41.7%	17	32	6	157
TOTAL	2243		88	66	21	2068	92.2%	807 (39.%)	1111 (53.7%)	150 (7.3%)	

rationale behind the requirement, "how-to" suggestions, and examples of successful solutions.

The UFAS checklist, is intended to be used by plan reviewers and building surveyors to assist them in determining the level of compliance of the design or construction with the new construction requirements of UFAS. It will contain all the components of the standard in abbreviated form in a loose-leaf format for ease of use in the field or in the office.

SENATOR LAUTENBERG: What role, if any, does the Department of Justice play in your compliance and enforcement mission? Does the Board regularly refer cases for prosecution to the Department of Justice, or are all cases prosecuted by your own General Counsel's office?

ANSWER: The Department of Justice does not have a role in the Board's compliance and enforcement mission. Section 502(e)(2) of the Rehabilitation Act authorizes the Executive Director of the Board to initiate formal proceedings before an Administrative Law Judge when complaints cannot be resolved informally. Section 502 (d)(2) of the Rehabilitation Act further authorizes the Executive Director of the Board to appear for and represent the Board in any court proceeding to enforce the final order of an Administrative Law Judge, except before the Supreme Court.

SENATOR LAUTENBERG: In your justification, you state that you anticipate opening 200 new compliance cases in FY 1991. How does that compare to FY 1989 and 1988?

ANSWER: In FY 1989, 176 cases were received and in FY 1988, this number was 200. At the end of the third quarter of FY 1990, a total of 132 new cases have been opened; at the same rate, the total number of new FY 1990 cases would be less than 200.

SENATOR LAUTENBERG: Are there other comprehensive libraries for access and disability issues other than that maintained by the Board? If so, where, and how do their collections compare to that of the Board?

ANSWER: In addition to the Board's technical library, we are aware of three other significant reference collections related to the technical aspects of access and disability.

The Adaptive Environments Center located in Boston, Massachusetts maintains a library of 3,500 volumes which can be accessed by the public. However, it functions primarily as a resource for staff and its availability is not advertised. The original collection was cataloged in a card file which has not been fully maintained since the early 1980's. No computerized database is available. The collection is divided among the following categories: Design and Construction, Environmental Psychology, Children, Schools and Classrooms, Housing, Accessibility (including legislation), Advocacy/Resources, Play and Recreation, Arts and Cultural Settings.

Barrier-free Environments Inc., Raleigh, North Carolina. This architectural and consulting firm has an in-house technical library which is not open to the public. Approximately 3,000 holdings are grouped and shelved within 30 to 40 major topics. Since the collection was developed to serve the needs of this firm, it has not been cataloged or incorporated into an automated database.

Paralyzed Veterans of America (PVA), Washington, D.C. A report in the March 1990 issue of Paraplegia News states that PVA is currently utilizing the basic content of the acquired library of the now defunct National Center for a Barrier-free Environment and that PVA now has "a collection of several hundred documents." The following subject areas are covered: Resources, Professional Activities, Disability Rights Activities, Human Groups and Disabilities, Regulations, Facility Types, Facility Elements, Environmental Systems, Transportation, Assistive Devices and Mobility Aids. Holdings are cataloged. At present, there is no database. Members of the public may use the library.

The Access Board's technical library currently houses approximately 4,000 documents. Bibliographic entries (including abstracts) are maintained on a computerized database which utilizes approximately 200 key words for locating specific subject matter and creating detailed subject bibliographies. All documents are cataloged and shelved according to the following categories: ATBCB Materials, Laws, legislation, Codes, and Standards, Litigation, Buildings and Elements, Transportation, Persons with Disabilities, Manufacturers' Product Literature, Reference/Resource Materials. Additionally, a slide collection and a variety of relevant periodicals are maintained. The library is open to the public and its availability has been advertised in our newsletter. Visitors are requested to make appointments so that the appropriate technical specialist is available to assist in the selection of relevant materials and in using the database, and to ensure the library space, which is also used for agency meetings, is available.

SENATOR LAUTENBERG: What types of disabilities fall under the heading of "sensory impairments"?

ANSWER: Typically, sensory impairments are those involving losses of hearing and vision. Although it is not within the Board's purview to categorize disabilities, the Rehabilitation Services Administration of the Department of Education classifies these disabilities in the Information Memorandum - RSA - IM-86-33: April 17, 1986. Generally, people with hearing impairments experience barriers, to varying degrees, involving spoken and aural communication. People with vision impairments often have limited access to visual communication and may encounter barriers to mobility in specific environments.

We also are aware that others, particularly persons who are of advanced age, experience additional sensory deficits. The aging process may involve reduction in sensitivity to olfactory, tactile, and taste stimuli.

Impairments of any type will result in varying functional limitations depending on the specific environment, age of onset, available technological resources, and the specific coping strategies employed by an individual.

SENATOR LAUTENBERG: Your justification states that Board staff has provided UFAS training to approximately 33 federal agencies. Please list these federal agencies. Do other federal agencies provide any financial support for UFAS training, or are all expenses met by the Board?

ANSWER: In the past year, the Access Board participated in approximately 33 training presentations to federal agencies, state and local government agencies, professional organizations, and other groups. Among the federal agencies involved in training were the National Park Service, U.S. Forest Service, Department of Housing and Urban Development, Smithsonian Institution, Department of Energy, National Security Agency, Foreign Buildings Office of the State Department, and Bureau of Land Management. On an invitational basis, federal agencies request ATBCB staff to act as a resource in their training programs and will cover transportation, lodging and per diem expenses if required.

SENATOR LAUTENBERG: Your justification notes that you anticipate an increasing number of requests for information in the future. Would you anticipate this to be true without enactment of the Americans With Disabilities Act?

ANSWER: Yes, even without the Americans With Disabilities Act, the Board's requests for technical assistance and training have continued to increase each year. The numbers of information packages mailed is a good measure of our activity in this area.

YEAR	# OF INFORMATION REQUESTS (est)	# OF WRITTEN RESPONSES AND PACKAGES MAILED
1987	875	464
1988	1,200	900
1989	3,000	1,300
1990 (6 mos)	3,400	1,444*

*An additional 900 packages of agency publications were mailed through the Association for Retarded Citizens (ARC), the agency's contract mailing service, or by Access Board request, through the Naval Publications and Forms Center in the first six months of 1990.

SENATOR LAUTENBERG: As part of your research initiatives in the area of transportation, you note that you will be performing research addressing issues of safety, communication, and way-finding concerns, and identifying existing technologies that could be incorporated in transit facilities to address these concerns. As part of this research, will you be evaluating the costs to transportation authorities to install and maintain these technologies?

ANSWER: The focus of the project is to develop advisory guidance rather than mandatory requirements. Nevertheless, as part of the final reports, we generally request that the contractor perform preliminary cost-impact analyses such as those included in the Visual Alarms and Auditory Alarms projects. The concept is to propose alternative measures for addressing various barriers with cost and effectiveness trade-offs.

SENATOR LAUTENBERG: You note the Board's objective of implementing the Board's legislative program in the justification. Is it part of the Board's mission to recommend and advocate certain legislative initiatives? If so, what is the Board's legislative program for this session of Congress, and how is this program determined from year to year?

ANSWER: Section 502(b)(2) and (6) of the Rehabilitation Act confer broad authority on the Board to investigate and examine alternative approaches to architectural, transportation, communication, and attitudinal barriers confronting individuals with disabilities and to make legislative and administrative recommendations to the President and Congress for eliminating such barriers. The Board regularly reviews proposed legislation which would impact upon accessibility for persons with disabilities and makes recommendations to the Administration on the legislation. During this session of Congress, the Board was actively involved in preparing background papers for the Administration on the transportation and public accommodations provisions of the Americans with Disabilities Act (S.933/H.R. 2273) and responding to requests for technical assistance from relevant Congressional Committees on the legislation. The Board has also worked with the Department of Justice on studying possible amendments to the Architectural Barriers Act of 1968 with respect to existing buildings acquired by the Federal Government and buildings constructed with federal grants or loans. Finally, the Board is considering amendments to its authorizing legislation which is up for reauthorization during the next session of Congress.

SENATOR LAUTENBERG: What is the status of the Board's drug testing program? What employees are being tested for drug use? Has the Board's drug testing program been challenged in court? If so, what were the results of the court challenge?

ANSWER: The Board's Drug-Free Workplace Plan is awaiting certification by the Department of Health and Human Services (HHS). The drug-testing program cannot be implemented until the plan is certified by HHS. The Board's General Counsel has recently reviewed the positions subject to random testing under the plan to ensure that they are consistent with the court decisions in Skinner v. Railway Labor Executives' Association, 109 S. Ct. 1402 (1989); National Treasury Employees Union v. Von Raab, 109 S. Ct. 1384 (1989); and Harmon v. Thornburgh, 878 F. 2d 484 (D.C. Cir. 1989).

SENATOR LAUTENBERG: Your justification notes than objective of your general and administrative services function is to implement agency audit recommendations. By these recommendations, do you mean specifically those recommendations included in the management and organization study conducted by the Veterans Administration in January 1988? If not, what other audit recommendations are you referring to? What are those recommendations and what is the status of the Board's response to those recommendations?

ANSWER: We are referring to the December 4, 1988 audit recommendations made by the General Services Administration's Office of Inspector General. Those recommendations were: (1) setting a specific time requirement of 15 calendar days for the submission of travel vouchers to the approving official after travel is completed, (2) updating the current property inventory listing and reconciling it to GSA account totals, and (3) developing and adhering to realistic procurement plans. All recommendations have been fully implemented.

SENATOR LAUTENBERG: Please provide an updated analysis of the status of recommendations of the VA management and organization report. Please feel free to use the format used beginning on page 1022 of last year's hearing record.

ANSWER: The recommendations of the VA management are summarized below with a brief statement on the status of the implementation of the recommendation.

BOARD/EXECUTIVE DIRECTOR RELATIONSHIP

Develop a position description for Board members.

Status: The roles of Board members are now well defined and are reviewed at the Board's annual retreat.

Clarify authorities and delegations between Board and staff. Review and modify statements in the Federal Register.

Status: The revision is complete.

Identify experienced consultant to improve relations between Board and staff.

Status: No longer needed.

Provide the Executive Director the opportunity to attend advanced management training.

Status: Management training is included in the development plan of the Executive Director.

BOARD ORGANIZATION

Develop a functional description of the Executive Committee.

Status: Functional statements have been completed.

STAFF ORGANIZATION

Each unit should develop a functional description and review processes. The Executive Director should issue a directive to establish consistency.

Status: Functional statements have been completed and will be incorporated in the agency's Administrative Communications System.

BOARD MEETING PREPARATION/CONDUCT

Improve Board orientation to include interchange of qualifications between Board members and staff; explanations of the federal budget; procurement and personnel policies and processes; and a presentation about accessibility issues.

Status: An orientation notebook has been developed, and new members are invited to spend at least a day in the offices.

Develop a video presentation on accessibility issues.

Status: Scheduled for funding in FY 1991.

Tailor agenda packet to each committee's function and distribute only to committee members. Align staff to mirror the Board committee structure.

Status: The agenda packet has been significantly streamlined.

Committee liaisons should be prepared to orally brief the committee on the background of each item to be addressed in the committee.

Status: The liaisons are in constant contact with the Committee Chairs.

Committee chairperson should brief the entire Board on committee activity at the full Board meeting.

Status: The agendas are structured to accommodate this recommendation.

Present only a brief summary of the committees' agenda to the entire Board.

Status: The agendas are structured to accommodate this recommendation.

Develop a written policy stating the Board member travel arrangement procedures.

Status: A booklet on travel policies and procedures has been published.

Have all public Board members stay in one accessible hotel.

Status: One accessible hotel is now used.

Conduct a parliamentary procedure briefing or session for the Board members as part of the initial orientation and offer refresher training.

Status: The current Board members have a good working knowledge of parliamentary procedures.

Identify skill requirements of Board members and conduct periodic skill development presentations at Board meetings.

Status: Ongoing.

Reduce the number of committees to decrease duplication, increase communication, and shorten meetings.

Status: Accomplished by the Board reorganization.

Increase federal agency participation by inviting member agencies to make presentations.

Status: Federal agency participation is increasing.
Increase personal cooperation among Board members.

Status: The Board now uses an informal, annual planning retreat to assess its mission, goals, and objectives.

COMPLIANCE AND ENFORCEMENT

Pursue initial verification of federal funding by telephone, followed-up in writing.

Status: Use of informal telephone negotiations has increased significantly.

Establish a log containing confirmed federal funding information for further jurisdiction questions.

Status: The information is now entered into the automated Complaint Tracking System.

Reexamine the need for contracted legal services.

Status: Contract legal services are no longer utilized.

Restrict the authority to sign compliance letters to the Director, Compliance and Enforcement, until the case becomes a legal issue. Then the General Counsel should sign all letters.

Status: The recommendation is now current operating procedure.

Reduce the number of layers of review.

Status: Accomplished.

Use Compliance Specialists for routine complaint processing instead of attorneys.

Status: Accomplished.

Align the Compliance and Enforcement staff by agency.

Status: Accomplished.

Create a Systems Administrator position to make the complaint tracking operational.

Status: Accomplished.

Record the compliance specialists name in the log book at the time the complaint is initially logged in.

Status: Accomplished through the Complaint Tracking System.

Utilize charge-out cards when cases are removed from the file.

Status: Accomplished.

Eliminate the use of lengthy case reviews.

Status: Accomplished.

Develop internal procedures for recording complaint information to increase consistency.

Status: Accomplished.

GENERAL AGENCY CONSIDERATIONS

Engage a consultant to assist in long-term planning and skill development.

Status: The Board now holds an annual planning retreat to update its 5-year plans.

Provide training to Board members on the federal budgetary process and how it relates to the ATBCB.

Status: Accomplished.

Increase efforts to actively involve the Agency's disabled constituency.

Status: Outreach and communication to all of the Board's constituencies are now major parts of the Board's programs. An example of our outreach efforts is the public forum we hold at each out-of-town Board meeting.

SENATOR LAUTENBERG: Will the Americans With Disabilities Act (ADA) put greater responsibilities on the Board and its staff? If so, please detail the additional responsibilities that the Board might be responsible for, should the ADA be enacted.

ANSWER: The Board will have the following new responsibilities under the Americans with Disabilities Act (ADA) as reported out by the Senate and House Conference Committee:

a) Supplement the MGRAD to include requirements for transit vehicles and facilities, public accommodations, recreation, and communications;

b) Develop technical assistance manuals for individuals and entities with rights and duties under the ADA with respect to architectural, transportation, and communication barriers;

c) Conduct technical projects to maintain and update the new MGRAD provisions required by the ADA;

d) Develop a government-wide technical assistance plan with the Department of Justice;

e) Implement the technical assistance plan with respect to public accommodations and transit systems;

f) Assist the Department of Justice certify State and local building codes upon application by State or local governments; and

g) Review and comment on the over-the-road bus study conducted by the Office of Technology Assessment.

SENATOR LAUTENBERG: Please cite what responsibilities would be required under the House version only or the Senate version only of the legislation.

ANSWER: The above responsibilities are required under the Senate and House Conference version of the legislation.

SENATOR LAUTENBERG: What costs do you associate with these additional requirements? When do you see the need for any enhanced resources in FY 1991? Will there be any additional requirements in FY 1991 for the implementation of the ADA, or are all of these requirements likely to come in FY 1992 and beyond? Please be specific.

ANSWER: We anticipate a need for enhanced resources in FY 1991 since our new responsibilities under the ADA in the first year following enactment are both staff and contract intensive. In FY 1991, our preliminary estimate is that the Board would require an additional $1,942,000 and 11 full-time equivalent positions to fully implement its responsibilities.

SENATOR LAUTENBERG: Is there any consideration being given toward moving the offices of the Board? If so, when is such an office move likely, and what will be the implications for rental costs for the Board?

ANSWER: The Board is considering moving its offices since we have been advised by GSA that it does not intend to renew the lease at our current location beyond April 1992. Accordingly, the budget implications will be reflected in our FY 1992 budget submission. Finally, we anticipate an increase in our space requirements pursuant to implementation of ADA responsibilities. This may necessitate an office move earlier than FY 1992.

SENATOR LAUTENBERG: In last year's testimony, you noted your accomplishments in fiscal year 1988 and further expectations for fiscal year 1989 to enhance the visibility of the Board. What steps have you taken to enhance the Board's visibility, and are any more steps anticipated in fiscal years 1990 and 1991?

ANSWER: In FY 1990 and FY 1991 the Board will continue holding public forums at out of town Board meetings, speaking at selected conventions of its constituency groups, offering toll-free telephone access to the public, and broadly disseminating agency publications. Board members will continue to be active in their local communities to further enhance the Board's visibility. Finally, the Board will continue its Chairman's Award Program to recognize private sector examples of exemplary approaches to providing accessibility.

SENATOR LAUTENBERG: In your testimony last year, you noted your expectation to implement new management improvements at the Board. What such steps were taken in FY 1990, and what steps do you expect to take in FY 1991? What cost savings might be associated with these initiatives?

ANSWER: In FY 1989, an internal directive system was established for communication of significant administrative and management policies and procedures to the staff. We are now developing the directives and will continue to do so in FY 1991. While we have not specifically assessed budget implications of this initiative, we do anticipate improvement in management of such areas as staffing, position management, travel, leave administration, procurement, and property utilization.

SENATOR LAUTENBERG: In last year's hearing record, you noted that the Board initiated a new tracking procedure in December 1988 that allows you to identify the nature of information requests and well as data regarding the requestor of such information. What can you report to us on the nature of the information requests the Board received during either fiscal year or calendar year 1989 and 1990, and what individuals are making such information requests? How have you used the information from the tracking system to prioritize the work of the Board? Please provide whatever relevant data you have accumulated using this tracking system.

ANSWER: The Access Board has continued to use, successfully, the inquiry tracking system developed in December 1988.

Information from the system was used to develop a series of charts for calendar year 1989 and the first six months of 1990. These charts provide data on the number of packages mailed per month as well as a breakdown as to the type or nature of information requested. An additional chart provides information on the types of people or organizations utilizing the agency's services. This breakdown includes professional, consumers, service organization, government agencies, industry related, and other categories. The charts are included for reference.

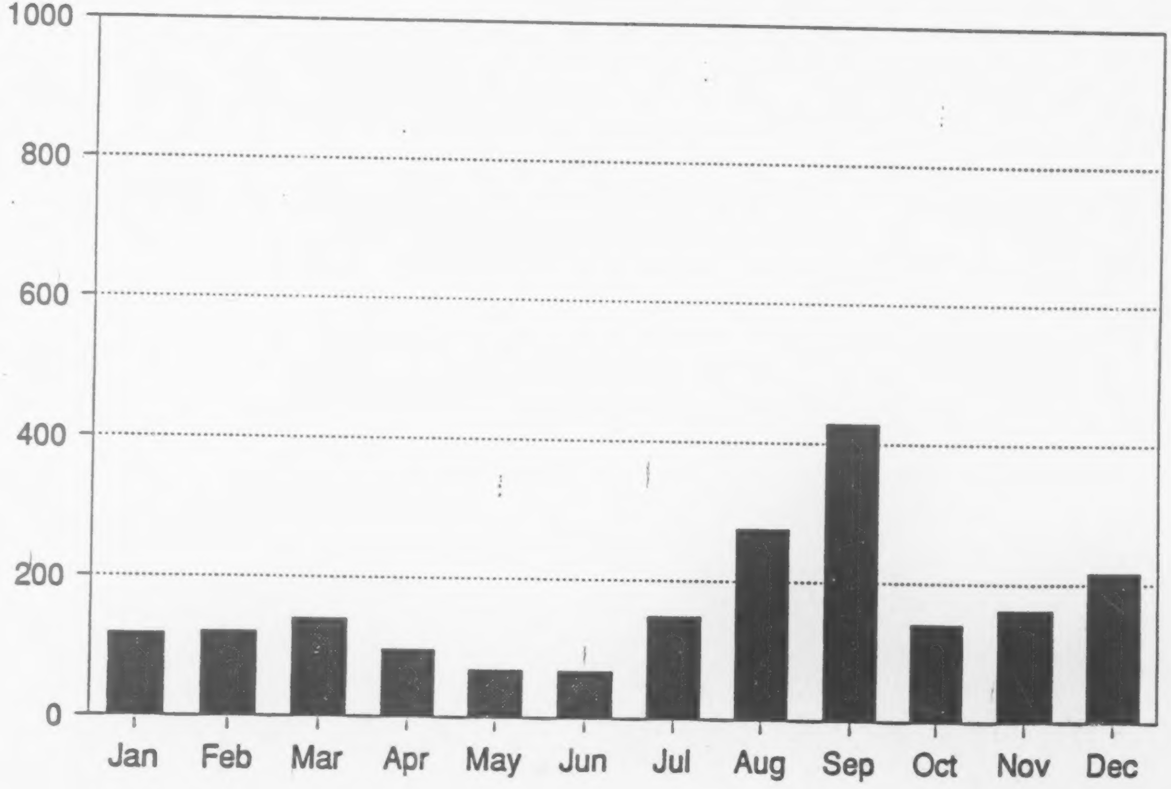
The information has proved useful in many ways. It provides a good way to measure the increase in packages mailed and related staff workload and to identify when shifts take place in the nature of inquiries. For example, in the first half of 1990 the total number of requests doubled. While questions on legislation increased to 15.8% of all inquiries versus 12% in calendar year 1989, the percentage of inquiries on architectural design decreased 4%. This change can be explained by the increase in number of questions on the ADA.

This type of information is currently being used to assist the agency in making decisions related to utilizing staff resources and in developing and printing publications. The information will become more useful when, over time, the Board will be better able to document, track and respond to trends.

(The charts follow:)

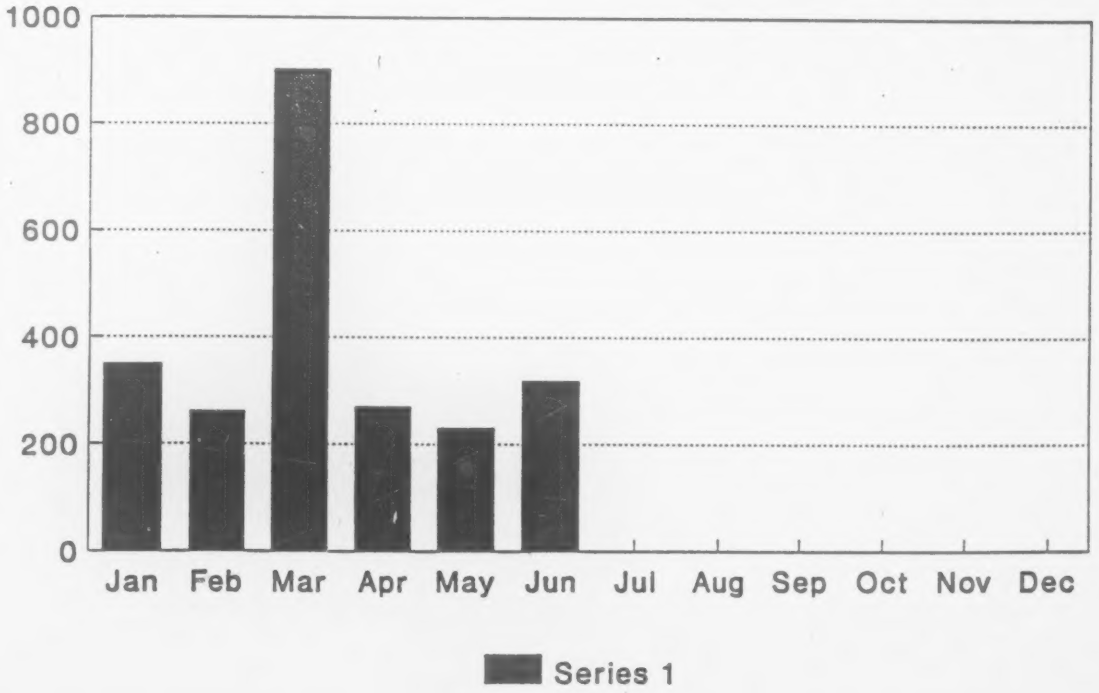
Information Packages Mailed

January - December 1989



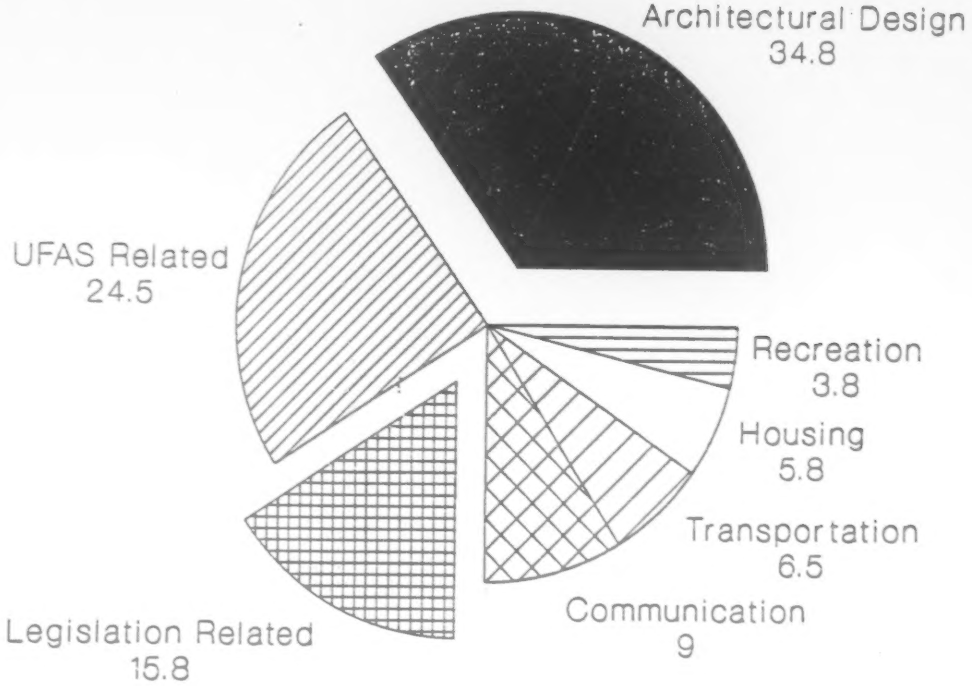
Numbers of Information Packages Mailed

January - June 1990

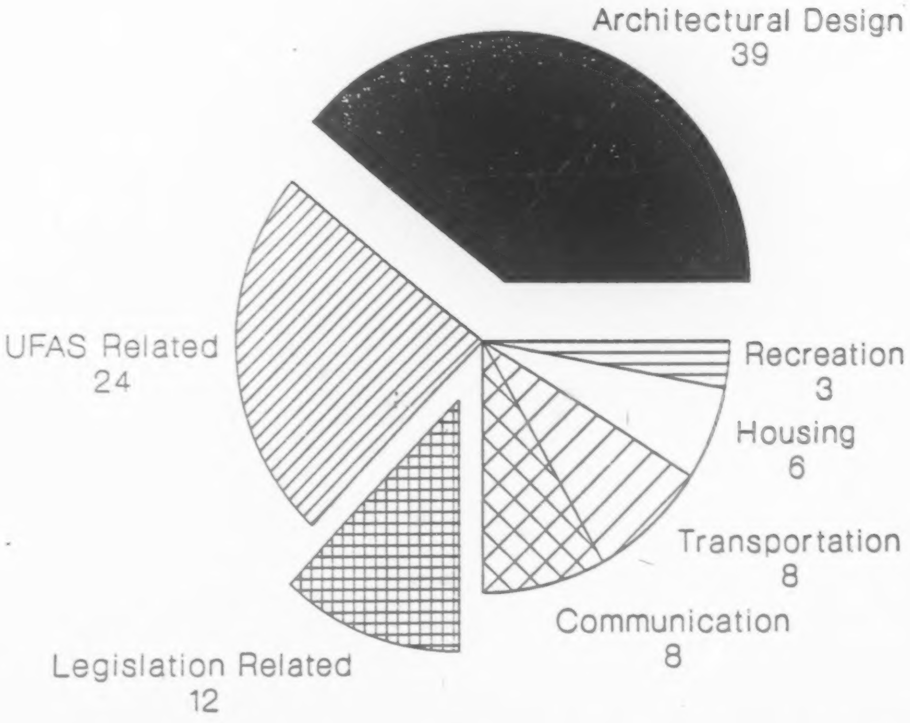


Includes 1,444 mailed by OTIS staff

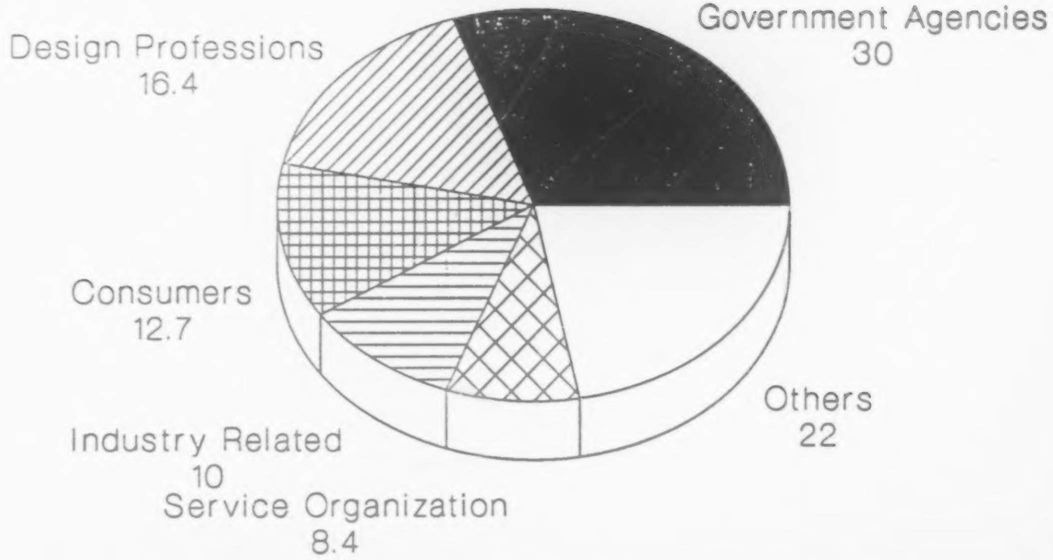
Types of Requests
January - June 1990



Types of Requests
January - December 1989



Organizations and People
Requesting Information



SENATOR LAUTENBERG: As part of last year's testimony, you noted the Board's finding that there "appears to be a widespread lack of compliance with existing federal, state, and local standards." How would you quantify the degree of non-compliance of federal, state, and local standards? If such non-compliance is so widespread, what steps has the Board taken in its compliance and enforcement area to address this considerable problem?

ANSWER: The information regarding the lack of compliance with federal, state and local standards was gathered through public comments at Board hearings, the Board's experience with private sector and public sector facilities encountered when meetings were held in other cities, and from staff experience. Other anecdotal evidence abounds. In the "Best of Accessible Boston" competition sponsored by the Adaptive Environments Center and the City of Boston, the highest award was not given to any building since no building fully complied with the Massachusetts standards. There appears to be no cost-effective way in which to precisely quantify the degree of non-compliance with accessibility standards.

The Board has chosen to address this problem through its pro-active technical assistance and training programs. It is the Board's belief that increased understanding of applicable standards and technical requirements along with an increased understanding both of the intent behind requirements and ways to implement the standards, results in increased compliance. This approach is more cost-effective both for the agency and for those who design, construct, manage and use facilities.

SENATOR LAUTENBERG: Has your research focus on transportation issues increased your contact with the modal administrations within the Department of Transportation? Have you generally found them to be cooperative in your efforts? Have any of the modal administrations been extraordinarily uncooperative or extraordinarily cooperative in your efforts? What focus topics do you anticipate in the future for your research agenda, after you have completed your transportation-related research?

ANSWER: Contact between the Board and the Department of Transportation continues to be primarily through the Office of the Secretary (OST), although direct contact and cooperation with each of the modal administrations occurs periodically. For example, the Board worked with the FAA for many years on the production of the Access Travel: Airports booklet until it was taken over by the Airport Operators Council International. Of course, primarily through OST, Board members and staff participated on the regulatory advisory committee assembled to draft regulations for the Air Carrier Access Act.

Also, UMTA invited Board and staff participation on the advisory panel assembled to develop guideline specifications for lifts, ramps and securement on buses and paratransit vehicles. Board staff moderated one of the panels during a conference in Seattle as part of the project. Recently, UMTA invited Board staff to participate in meetings to coordinate UMTA and Board technical assistance, and research projects and negotiations are under way to execute an interagency agreement to develop training materials for a major Board-sponsored training program for UMTA regional office staff and transit agencies. Board staff were also solicited to participate on a regulatory advisory committee sponsored by FHWA on parking for persons with disabilities.

As the knowledge of the Board's expertise and availability as a resource spreads, we anticipate further cooperative projects.

Topics proposed in the five-year plan for "focus years" after transportation are recreation and urban spaces. However, the Board plans to review and update that original plan and make changes as necessary. For example, it is anticipated that the rulemaking under the ADA will obviate some of the previously proposed projects; new issues for technical assistance and research projects will also inevitably be identified during the rulemaking and public comment periods.

SENATOR LAUTENBERG: Please update the information found on page 945 of last year's hearing record regarding the status of terms of members of the Board, including both federal and public members. Please note the attendance record of each of these Board members since they have joined the Board and identify whether the federal members have themselves attended the meetings or have sent a deputy.

ANSWER: The information follows. The federal member may not be represented, for voting purposes, by a deputy.

Public Board Members	Term of Service
Howard Adams	04/08/87 - 12/03/89*
Robert Brostrom	03/12/86 - 12/03/88
(second term)	12/07/88 - 12/03/91
Steven Bull	03/08/88 - 12/03/90
Susan Castle	12/07/88 - 12/03/91
Gene Chappie	04/08/87 - 12/03/89*
Robert Cothren	04/08/87 - 12/03/88
(second term)	01/18/89 - 12/03/90
Eugene Johnson	03/08/88 - 12/03/90
Robert Kelly	04/08/87 - 12/03/89*
William McCabe	02/22/88 - 12/03/90
Howard Stone	12/07/88 - 12/03/90
Glen Stotler	02/22/88 - 12/03/90
William J. Tangye	07/01/85 - 12/03/86
(second term)	04/08/87 - 12/03/89*

*Pending White House action on appointments/reappointments.

Federal Members	Agency
Christopher Jehn	Department of Defense
Robert Davila	Department of Education
Rebekah T. Johnson	General Services Administration
Michael Astrue	Department of Health and Human Services
Gorden Mansfield	Department of Housing and Urban Development
Lou Gallegos	Department of the Interior
John R. Dunne	Department of Justice

Robert P. Davis	Department of Labor
Jeffrey N. Shane	Department of Transportation
Stanley W. Smith	United States Postal Service
Allen B. Clark	Department of Veterans Affairs

Attendance at the Board's meetings is shown in the following chart.

May 1989 - May 1990
Members and Federal Liaison Staff Present

	Federal Members	Liaisons	Public Members
May 1989	1	5	11
August 1989	3	6	11
November 1989	1	2	10
January 1990	4	5	12
March 1990	3	10	11
May 1990	8	9	10

SENATOR LAUTENBERG: Did the Civil Rights Restoration Act influence the number of cases where the Board found itself to have jurisdiction over certain complaints? If so, how? Please provide relevant data.

ANSWER: The Civil Rights Restoration Act affects only Section 504 of the Rehabilitation Act and has not had any impact on the number of complaints received by the Board under the Architectural Barriers Act.

SENATOR LAUTENBERG: How many violations were found as a result of complaints in FY 1989 and how do those numbers of complaints and violations compare to FY 1987 and 1988. What about FY 1990 to date?

ANSWER: We do not compile data on the number of violations of federal standards but rather on the number of cases where violations have been corrected. It is important to note that, in any given complaint case, one or more violations of standards might exist. For example, a case about a drinking fountain that is mounted too high in an ABA-covered building would entail one violation while another case with multiple barriers such as an inaccessible entrance door, parking spaces and elevator would involve several violations of the standards.

Of the 176 complaints received in FY 1989, 133 (76%) have been closed as of July 5, 1990. Of the 133 closed cases, 35 (26%) were closed because action was taken to correct the violation(s) and 8 (6%) were closed because no violation of the applicable accessibility standard was found. The other 90 (68%) were closed because the ATBCB did not have jurisdiction. Since we do not proceed with an investigation in these cases, a determination whether a violation of standards actually exists is not made.

In FY 1987, 217 complaints were received; of these, 204 (94%) have been closed by July 1990. Of the 204 closed cases, 99 (49%) were closed for corrective action, 19 (9%) for no violation and 86 (42%) for no jurisdiction. In FY 1988, 200 complaints were received and as of July 1990, 180 (90%) of these have been closed. Of these

180 closed cases, 48 (27%) were closed for corrective action, 21 (12%) for no violation and 111 (61%) for no jurisdiction.

Thus far in FY 1990, 55 (42%) of the 132 cases received have been closed. Of the 55 closed cases, 17 (31%) for corrective action, 6 (11%) for no violation and 32 (58%) for no jurisdiction.

SENATOR LAUTENBERG: Please update the figures provided on page 952 of last year's hearing record regarding the number of complaints and percentage of complaints at each federal agency.

ANSWER: The federal agencies responsible for the facilities involved in the 176 FY 1989 complaints are as follows:

Complaints against federal agencies:		
U.S. Postal Service	33	(18.7%)
Department of Housing and Urban Development	21	(11.9%)
Education Department	17	(9.7%)
General Services Administration	15	(8.5%)
Department of Transportation	15	(8.5%)
Department of Interior	8	(4.5%)
Department of Health and Human Services	6	(3.4%)
Department of Defense	4	(2.3%)
Department of Justice	2	(1.1%)
Other Federal Agencies	9	(5.1%)
Non-Federal Agencies	46	(26.1%)

It should be noted that the number of complaints against a particular agency is more an indication of the type of federal or federally-funded building people need or want to use rather than an agency's responsiveness to accessibility requirements. The higher number of complaints against USPS can be attributed to the fact that the Postal Service operates over 36,000 facilities which are used daily by persons with disabilities rather than to any lack of commitment to accessibility on the part of USPS.

SENATOR LAUTENBERG: Please describe what HUD facilities are and are not subject to the Board's standards. Are there any changes in policy in this regard currently under consideration?

ANSWER: The Architectural Barriers Act contains four limitations which affect coverage of Department of Housing and Urban Development (HUD) assisted facilities.

First, the Architectural Barriers Act excludes from its coverage privately-owned housing unless it is leased by the federal government for subsidized housing programs.

Second, the Architectural Barriers Act covers facilities financed through federal grants or loans but does not cover facilities assisted through federal rent subsidy or mortgage insurance programs.

Third, the Architectural Barriers Act excludes existing facilities acquired through federal grants or loans unless federal funds are used to alter or rehabilitate the facilities.

Fourth, the Architectural Barriers Act applies to facilities financed through federal grants or loans only "if such building or facility is subject to standards for design, construction, or alteration issued under authority of law authorizing such grant or loan." 42 U.S.C. §4151(3). This last limitation has sometimes resulted in differences of opinion between the Board and HUD. For example, in the past, HUD has maintained that is lacks authority under the Housing and Community Development Act, to impose any standards on facilities financed with community development block grants and urban development action grants. However, Section 108 of the Housing and Community Development Act 42 U.S.C. §5308, which prohibits discrimination on the basis of disability in programs and activities funded with community development block grants and urban development action grants provides authority for HUD to impose accessibility standards on such facilities. HUD issued final rules implementing Section 108 of the Housing and Community Development Act, as well as Section 504 of the Rehabilitation Act, effective July 11, 1988 and the rules include accessibility standards. See 53 Fed. Reg. 20216 (June 2, 1988) (adopting 24 C.F.R. Part 8). HUD has recently reviewed its position and now agrees that facilities funded under the Housing and Community Development Act are covered by the Architectural Barriers Act.

The Board has been working with the Department of Justice on possible amendments to the Architectural Barriers Act which would cover all facilities financed through federal grants or loans regardless of whether the funding statute authorizes the administering agency to impose any kind of standards on the facilities.

SENATOR LAUTENBERG: Please provide additional detail regarding the types of complaints against non-federal agencies. What types of non-federal agencies are receiving the most complaints? How does your ability to enforce standards against non-federal agencies compare to that of your ability to enforce standards on federal agencies?

ANSWER: First, it is important to understand our designation of non-federal complaints. This means that the Access Board's primary contact or respondent is a non-federal entity such as a state or municipal government when the case concerns a courthouse or city hall or a private entity when the case involves a restaurant, for example. In the cases where these entities have received federal funds which are subject to the ABA, we pursue an investigation. Where no covered federal funds are involved, we close these cases because we have no jurisdiction.

At present, we have 42 active cases where our primary contact is a non-federal entity and not the federal agency that may have provided funds. These cases can be broken down as follows:

Parks and recreation facilities	14
Schools and colleges	6
Street and roadway projects	4
Libraries	3
Courthouses & city halls	3
Medical	2
Housing projects	2
Other facilities	8

The most frequently cited barriers were inaccessible ramps, parking spaces, entrances, rest rooms, and walks and pathways.

SENATOR LAUTENBERG: You note in last year's testimony that the United States Postal Service has become one of the most responsive agencies working with the Board. What federal agency would you identify as the least responsive to the efforts of the Board? What about non-federal agencies? What non-federal agencies have been especially non-responsive to the Board?

ANSWER: As indicated last year, the Postal Service continues to be one of the most responsive agencies. Another exemplary agency in terms of its commitment to accessibility is Department of Interior's National Park Service. While larger federal agencies may find it more difficult to meet specified response time frames due to their many competing priorities and extensive levels of communication and clearances, over the past few years we have found all agencies to be more aware of and committed to accessibility.

Further, it is noteworthy that most non-federal respondents are very conscientious about providing requested information within specified time frames. The cooperation of this group is, in fact, commendable, with many choosing to take corrective action voluntarily to remove the accessibility barrier(s) that our complaint has brought to their attention, even though we would not have jurisdiction to enforce the standards.

SENATOR LAUTENBERG: Please provide a summary of the outcomes of the Board's formal actions in FY 1989 and 1990 to date. Please update the Board's findings regarding the Southeastern Pennsylvania Transportation Authority (SEPTA). Has there been any further progress regarding the four stations where the Board and SEPTA were still in disagreement as to what steps should be taken to make them fully accessible? Is the level of accessibility of these four stations the only disagreement pending between the Board and SEPTA? What actions is the Board considering regarding its disagreements with SEPTA?

ANSWER: The Board initiates formal proceedings before an Administrative Law Judge to enforce the Architectural Barriers Act only when informal resolution of complaints is not achieved. In FY 1989, the Board initiated formal proceedings against the City of Philadelphia when it was unable to secure agreement from the City to install elevators at two transit stations. The case was eventually settled with the City agreeing to install an elevator at one of the stations. A study of the other station prepared by a structural engineer showed that it was structurally impossible to install an elevator at the facility.

With respect to the other four stations on the Philadelphia subway system that were under investigation last year, the city has agreed to take corrective action at two of the stations and the Board has determined that the Architectural Barriers Act did not apply to the third stations because federal funds were not used to design, construct, or alter the facility. An elevator will be installed at the fourth station pursuant to the terms of a settlement agreement in a separate lawsuit. The Board is further reviewing this station with respect to timetables for completion of the work.

The Board will continue to monitor those stations where the City or SEPTA has agreed to take corrective action until all the accessibility improvements are completed.

SENATOR LAUTENBERG: Please update the Committee regarding your negotiations with the Washington Metropolitan Area Transit Authority (WMATA). Please note what deficiencies the Board finds with WMATA facilities, how long the Board has been working on these problems, what steps WMATA has taken to address the concerns of the Board, and what steps remain to be taken to satisfy the Board's concerns?

ANSWER: The Board has worked on complaints against the following Washington Metropolitan Area Transit Authority (WMATA) stations during FY 1989 and FY 1990:

a) White Flint Station - WMATA has agreed to take corrective action to install conforming curb ramps, add stair railings, provide additional accessible parking spaces and access aisles, and remove a barrier in a median strip.

b) Friendship Heights Station - No violation was found with respect to providing a primary accessible entrance. The slope of the sidewalk and curb ramps at another entrance was too steep. The area is under construction, and the contractor is expected to correct the problem.

c) Twinbrook Station - WMATA has agreed to take corrective action with respect to the accessible parking spaces on the east side of the station. The Board and WMATA disagree over whether restripping of the parking lot on the west side of this station constitutes an alteration which would require WMATA to provide additional accessible parking spaces. The ramp at the west entrance to the station also does not contain required landings. The Board is presently reviewing the impact of a consent decree in prior litigation before deciding how to proceed with the case.

d) Forest Glen Station - WMATA has agreed to take corrective action to provide a conforming slope in the pedestrian access tunnel at the station. The Board is continuing to investigate other elements of the station.

e) King Street Station - WMATA has agreed to take corrective action to eliminate high lips on two curb ramps at this station.

The Board will continue to pursue these complaints and monitor corrective action until it is completed.

SENATOR LAUTENBERG: How many visitors utilized the Board's library in FY 1989 and 1990? What costs are associated with maintaining the library?

ANSWER: The agency's technical library was developed as a resource for Board and staff to be used in developing the MGRAD and in responding to complex inquiries from other federal agencies and members of the public (both consumers and professionals in the building industry).

While information regarding the number of visitors using the library has not been recorded, the following represents some of the types of people we have welcomed this year: representatives of other federal agencies such as DOJ and EEOC, professional researchers representing the building industry such as the National Association of Home Builders, federal contractors, persons from state agencies as far away as Hawaii, historical researchers, Board contractors, The American Bar Association, staff from independent living centers, Amtrak, Los Angeles County Transportation Commission, local county Commissions for Persons with Disabilities, and the Paralyzed Veterans of America.

Technical specialists are contacted individually by visitors according to their specific area of interest e.g. transportation, architectural design or laws, regulations and codes associated with accessibility. The library space is also utilized for meetings, conferences, and as a workspace by all staff. Less than one percent of our budget is currently devoted to library acquisitions, maintenance, and computerization.

INTERSTATE COMMERCE COMMISSION

STATEMENT OF EDWARD J. PHILBIN

Fiscal Year 1991 Budget Request

Mr. Chairman, Members of the Subcommittee:

Thank you for the opportunity to provide this statement in support of the Interstate Commerce Commission's appropriation request for FY 1991. Before discussing the Commission's budget request, I would like to highlight some of the Commission's recent actions and plans for the immediate future.

The Commission has dealt with a number of policy issues in the rail area: preparing new streamlined procedures for State recertification to regulate intrastate rail transportation; addressing the Commission's procedures for handling of environmental, historical preservation, financial assistance, and trails use issues in abandonment exemptions; and addressing recyclable rate issues including the statute of limitation for complaints, procedures for monitoring compliance with the statutory rate ceiling, and the handling of reasonableness and discrimination complaints for ferrous shipments. Some of the significant rail cases decided recently include: the transfer of Chicago, Missouri and Western Railroad lines, and directed and emergency service over the lines of the Delaware and Hudson Railway Company. We have made progress on clearing the rail rate case docket. Last year in this hearing record, it was reported to you that the Commission had 13 rate reasonableness cases; only 7 of the earlier proceedings (embracing 10 cases) remain. Four newer proceedings are also pending. The Commission also has increased its focus on rail abandonments with more local hearings to complete evidentiary recordbuilding and discovery and is conducting more open hearings on Commission proceedings in order to provide greater access by the parties to the Commission and understanding of the Commission's decision-making process.

In the motor carrier area, the Commission has recently dealt with significant issues in the following areas: developing a new permanent and temporary authority licensing application with a view toward simplifying the process for the public and improving agency processing efficiency; adopting final rules providing for the registration of Mexican motor carriers; modifying motor carrier safety fitness procedures; determining whether transportation is interstate or intrastate commerce; determining appropriate tariffs for shippers' goods; modifying regulations to simplify transfer of operating authority; and finding that carrier efforts to charge higher filed tariffs are unreasonable where lower rates were negotiated but never filed.

The Commission has recently adopted regulations allowing rail carriers to file tariffs electronically as an eventual alternative to the filing of printed tariffs. We have also simplified rail tariff standards governing the filing and maintenance of tariffs in lieu of the current, detailed tariff regulations. The Commission stresses that the new tariff standards will permit, but not require, rail tariffs to be prepared, filed, and maintained electronically. The Commission staff will closely monitor the implementation of the rail electronic tariff filings during this transition period for any problems in using, filing, and maintaining electronically filed tariffs to aid the Commission in assessing the viability of electronic tariff filings for all carriers. The reduced cost of technical compliance with the simplified tariff rules should be passed along to the general public.

A significant number of Railroad Accounting Principles Board (RAPB) findings have been adopted by the Commission in the past year. Some of the areas the Commission has acted upon include the adoption of the Entity Principle to provide consolidated railroad and rail-related data for revenue adequacy determinations; adoption of modifications to rules on abandonments and light-density surcharge proceedings to comply with RAPB's cost-of-capital principles; adoption of the Productivity Principle for calculating the Rail Cost Adjustment Factor; and adoption of the Uniform Railroad Costing System (URCS) as the preferred general purpose costing system. These actions conclude implementation of the RAPB findings with the exception of minor programming improvements to URCS.

The Administration is again proposing to further deregulate interstate motor freight, household goods freight forwarder, property broker, bus, and inland waterway carriers and to sunset the Interstate Commerce Commission by October 1, 1990. The remaining rail regulatory functions and associated staff would be transferred to the Departments of Transportation and Justice. The handling of consumer complaints regarding household goods movers would be administered by the Federal Trade Commission.

The resource numbers underlying this legislative proposal are as follows:

$16.075 million and 224 staff-years transfer to DOT
$ 1.394 million and 18 staff-years transfer to Justice
$ 1.547 million and 25 staff-years transfer to FTC

The total resources to be transferred are $19.016 million and 267 staff-years. (These are close to the resources now devoted to rail matters at the Commission.) In addition, $15.364 million is requested to cover severance costs of Commission employees who would not be transferred to other agencies.

The Administration is also requesting an appropriation of $43.777 million and 645 staff-years under current legislation to fund the Commission in the event sunset legislation is not enacted. This request is 54 staff-years fewer than were expended in FY 1989 and reflects the Commission's continuing efforts to make the most efficient use of resources. The Office of Management and Budget recommended a staff level of 56 fewer than the budget originally developed by the Commission last summer in order to adjust staffing for the effects of the original FY 1990 Gramm-Rudman-Hollings sequester and to partially cover funding for the FY 1991 general schedule and executive level pay raise. This staff-year decrease is spread over most of the Bureaus and Offices. I would like to discuss the general merits of some of these reductions.

While most of the Commission's projected workload areas have remained relatively constant for FY 1990 and FY 1991, there has been some reduction of discretionary workload areas to compensate for the lower number of staff-years. This trend should continue, thus allowing reallocation of staff within the Bureaus and Offices to meet the anticipated workload with the staff-years requested.

Even though the FY 1991 workload for the Office of the Secretary will remain somewhat consistent with FY 1990, the FY 1991 reduced staff-year level of 76 is expected to be achieved through productivity improvements and consolidation of functions. The Office anticipates improving the automation of the docket microfilming by the end of this fiscal year with the installation of newer, less staff-intensive equipment. Also, through consolidations of functions in the Public Records Section, especially as they relate to application processing and docket indexing, additional staff-years can be saved in order to manage the Office workload with the requested FY 1991 staff-years.

The General Counsel indicates that his reduced staff-year level from 25 to 23 is sufficient. He expects a decrease in motor rate litigation with the resolution of most of the undercharge cases in the various circuit courts. He also expects a decrease in finance opinion and litigation workload with the end of the Greyhound/Trailways merger-generated cases. However, the recent Greyhound bankruptcy could have an impact on finance opinion and litigation workload especially in dealing with the Bankruptcy Court on issues of preservation of service and insurance compliance and also with potential bus exit and licensing cases regarding inter/intrastate bus operations. Also, efficiencies in computerization will provide for additional staff-year savings within the Office.

The Director of the Office of Proceedings believes that a staff-year level of 102 in FY 1991 is adequate in light of workload decreases and productivity improvements in the motor area, especially with the completion of some rate bureau investigations and the staff-year savings attributed to the new simplified licensing application. However, recent developments concerning the proposed sale of the Delaware and Hudson to the Canadian Pacific could impact rail finance cases with potential workload increases relating to mergers, trackage rights, abandonments, and environmental issues.

Staff-year resources devoted to the motor and rail workload in the Bureau of Accounts will decrease to 55 in FY 1991 from the authorized FY 1990 level of 61. The Office is currently handling the same workload level in FY 1990 as anticipated for FY 1991 with the same projected staff-year resources. These resources will be sufficient as most of the staff-intensive rulemaking and advisory workload related to implementing the RAPB findings has been concluded, thereby allowing staff-years to be reallocated to analytical and case-support activities within the Office.

The anticipated FY 1991 workload decreases in the Office of Compliance and Consumer Assistance will accommodate the reduction to 181 staff-years. Although the majority of the staff-year decreases will come from discretionary workload areas such as compliance surveys, the Commission will attempt to fulfill its responsibilities in overseeing the surface transportation industries' compliance with transportation statutes and Commission regulations. Workload and staffing in the motor investigatory and litigation function are also projected to decrease in FY 1991 to align with the staff-year request. Some of the investigatory functions are discretionary, and some are quick probes of special circumstances to determine if noncompliance exists. Other investigatory workload decreases pertain to insurance investigations which are less time consuming. Ultimately, the Office intends to balance the investigatory/litigation workload with the staff-years requested to ensure compliance with transportation statutes and Commission rules and regulations.

The Commission will need to address the provision and allocation of staff-years among the Satellite Offices handling congressional affairs; external affairs to other governmental agencies, the press, and trade associations; EEO and human relations; and Inspector General activities. While the requested staff-years may provide a basic level in these areas, the Commission would like to strengthen all programs and provide for the independence and objectivity of the Inspector General activities, especially in light of the GAO Report AFMD-90-46, "OIGs at Designated Federal Entities", and the concern of the Senate Committee on Governmental Affairs as to the Commission's effective fulfillment of the Inspector General responsibilities as defined in the Inspector General Act.

This budget proposal should provide for a staff-year operating level in FY 1991 which should be achieved through attrition. I am informed by my staff that sufficient funding is being requested to accommodate projected FY 1991 Commission activities at the workload levels projected for each Bureau and Office at their staff-year levels contained in this budget submission.

In addition, the Commission will be requesting a reprogramming in most offices to reduce the staff-years and dollar levels contained in the conference report on the FY 1990 Commission appropriation. The staff-year reductions are necessary to adjust for the effects of the final FY 1990 Gramm-Rudman-Hollings sequester and to fund the FY 1990 general schedule and executive level pay increase and the increased Commission share of the recent increase in health benefits premiums. I believe that these reprogramming actions are necessary and in the best interests of the Commission in order to maintain budget and fiscal integrity.

Directed Rail Service

Mr. Chairman, Members of the Subcommittee:

Thank you for the opportunity to discuss the Interstate Commerce Commission's FY 1991 budget request for directed rail service payments.

The Commission has exercised directed rail service authority (49 U.S.C. 11125(a)) on lines without Federal Government reimbursement in a few instances; the most recent occasions have been over the lines of the Delaware and Hudson Railway Company and the Chicago, Missouri and Western Railway Company.

The Commission authorized the New York, Susquehanna and Western Railway Corporation to provide unsubsidized, non-compensated directed service to the Delaware and Hudson shippers between June 23, 1988, and February 13, 1989, due to the Delaware and Hudson Chapter 11 reorganization bankruptcy proceedings. Based on the Trustee's inability to resume operations of the Delaware and Hudson and the expiration of the directed service period, the Commission extended New York, Susquehanna's authority to operate the entire Delaware and Hudson system until March 16, 1990, under a rail emergency provision of the Act (49 U.S.C. 11123(a)). On February 23, 1990, based on New York, Susquehanna's inability to continue to operate the entire Delaware and Hudson system, the Commission authorized a reduced operation under the emergency provisions until March 23, 1990.

In the case of the Chicago, Missouri and Western (CM&W), the Commission in October 1989 authorized the St. Louis Southwestern Railway Company to provide directed service on the Chicago to St. Louis lines pending sale to the Rio Grande Industries. The Atchison, Topeka, and Santa Fe Railway was authorized, in November

1989, to provide uncompensated directed service on the CM&W's east/west line for a period of 60 days until the sale of the line could be consummated. In both cases, directed service allowed continuation of service to the shippers and maintained the integrity of the lines for resale.

The last payments for directed rail service were made for directed service performed over the lines of the Chicago, Rock Island, and Pacific Railway Company between October 15, 1979, and March 23, 1980. The account has been inactive for some time, and currently no funds are available for directed service.

The Commission does not anticipate any subsidized or compensated directed rail service in FY 1990 or FY 1991. Therefore, we have not requested an appropriation of funds for this account under current legislation.

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

ELECTRONIC TARIFF FILINGS

SENATOR LAUTENBERG: The Commission recently decided to allow rail carriers to file their tariffs electronically. What are the cost implications of this new decision?

ANSWER: The Commission's action allowing rail carriers to file tariffs electronically has only minimal cost and workload implications. The conversion from paper to electronic tariffs is voluntary on the part of rail carriers, and the Commission's rules require carriers to supply the necessary computer facilities (personal computers, printers, modems, etc.) to implement their electronic filings, to the extent that such filings are not compatible with equipment already available at the Commission. This approach will result in a gradual migration to electronic tariffs and will allow the Commission to obtain additional computer equipment as the needs become more clearly defined.

On May 24, 1990, the Commission, through its General Counsel, requested an opinion from the Comptroller General to confirm the Commission's view that permitting carriers to supply computer hardware for purposes of electronic tariff filing does not constitute an unlawful budget augmentation or gift.

SENATOR LAUTENBERG: How will electronic filing of tariffs reduce or increase workload of ICC staff?

ANSWER: The Commission's tariff review staff has been significantly reduced in the last several years without a corresponding reduction in tariff filings received, and we anticipate that electronic filings will eventually require less clerical effort and allow us to do a more thorough job of analyzing the public interest aspects of tariff filings. While we anticipate that electronic filings will be processed more efficiently, the conversion process itself will impose additional workload demands, although we believe the voluntary nature of the authorization will result in a gradual implementation that may be handled by existing staff.

SENATOR LAUTENBERG: Will this decision result in increased computer costs in 1991 and beyond?

ANSWER: The electronic filing authority is voluntary; and we do not have a good estimate on how rapidly the rail carriers will implement it. However, we believe any increased computer costs will be minimal. Although the rate at which carriers will convert to electronic tariff filing is difficult to estimate, we believe that a 50 percent conversion is a reasonable assumption. Assuming a 50 percent conversion to electronic tariff filings within the next two years, we anticipate a requirement for approximately 10 personal computer-type work stations at a total cost of approximately $60,000.

The Commission still has before it the question of whether to allow motor carriers to file tariffs electronically, and motor carrier equipment needs would be in addition to those for rail carriers. It should also be pointed out that the Commission's electronic tariff filing authorization addresses only the statutory tariff filing process. We are separately studying the desirability of enhancing our analytical capabilities for existing and proposed tariffs, and this study might result in additional appropriation requests for computer hardware and/or software.

PENDING CASES

SENATOR LAUTENBERG: In the summary statement accompanying your budget justification for FY 1991, you state that the Commission has recently made significant progress in reducing pending cases in several areas. Please provide a table detailing the progress in reducing pending cases in each of these areas.

ANSWER: A table detailing the cases closed since January 1989 is attached. In addition to reducing the rate case backlog, the Commission has taken considerable action to move pending cases forward in, for example: No. 37038, Bituminous Coal, Hiawatha, UT to Moapa, NV (embracing No. 37409); No. 37063, Increased Rates on Coal-L&N (embracing No. 38025); and No. 39239S, Amstar Corp. v. The Alabama Great Southern Railroad, et al.

COMPETITIVE ACCESS CASES

Case No.	Title
F.D. 30759	Denver & Rio Grande Western and Missouri-Kansas-Texas v. St. Louis Southwestern Railroad--Joint Use of Terminal Facilities at Herington, KS.
No. 40068	Shenango, Inc., et al. v. Pittsburgh Chartiers and Youghiogheny Ry.
No. 40118	VISTA Chemical Co. v. Atchison, Topeka & Santa Fe Ry Co.

MARKET DOMINANCE/RATE REASONABLENESS CASES

Case No.	Title
No. 36114	Potomac Electric Power Co. v. Penn Central R. Co. with No. 36114 (Sub-No. 1), Potomac Electric Power Co. v. Conrail.

No. 37931S	Metropolitan Edison Co. v. Conrail.
No. 38301S	Coal Trading Corp. et al. v. Baltimore & Ohio Railroad.
No. 38301S (Sub-No. 1)	Westmoreland Coal Sales Co. v. Denver & Rio Grande Western Railroad.

RECYCLABLE RATE CASES

Case No.	Title
No. 37760	Aluminum Co. of America v. Louisville & Nashville Railroad.
No. 39038	Aluminum Association v. Alton & Southern Railway, handled with No. 39085, Reynolds Metal Co. v. Atchison, Topeka & Santa Fe Railway.
No. 39324	Pozzolanic International v. Burlington Northern Railroad.
No. 39690	Schuylkill Metals Corp. v. Kansas City Southern.
No. 39756	Pielet Bros. Trading Co. v. Chicago & North Western Transportation.
No. 39814	Pielet Bros. Scrap Iron & Metal, Inc. v. Atchison, Topeka & Santa Fe Railway.
No. 39883	Versatile Metals v. Chesapeake & Ohio Railway.
No. 40112	Aluminum Co. of America v. Atchison, Topeka & Santa Fe Railway.
Ex. Parte 319	Investigation of Freight Rates for the Transportation of Recyclable or Recycled Commodities and 6 related investigation proceedings.

STATE RECERTIFICATION

SENATOR LAUTENBERG: Your summary statement also notes that you adopted streamlined procedures for state re-certification of intrastate railroad regulation. Please provide greater detail on these streamlined procedures, and cite any cost implications of these changes.

ANSWER: By decision served July 24, 1989, in State Intrastate Rail Rate Authority, 5 I.C.C.2d 680 (1989), the Commission adopted streamlined procedures under 49 U.S.C. 11501(b) for State recertification to regulate intrastate rail matters. The in-depth review and analysis appropriate for implementing the original State certification was not necessary after the States had brought their rules into compliance with the Interstate Commerce Act. The Commission saw no need to establish a burdensome procedure on the States after they had achieved compliance only 5 years before. The Commission thus established an abbreviated procedure that does not require States to resubmit all of their standards and procedures.

Instead, they are required to certify that their standards and procedures remain the same, except to the extent they have been updated to reflect changes in Federal standards. They are required to submit a list of such updates. The streamlined procedures should result in cost savings to the States in preparation of the recertification application, and to the Commission in its review of those applications.

CHICAGO, MISSOURI & WESTERN RAILWAY

SENATOR LAUTENBERG: Your statement makes reference to the "adverse cash position of the Chicago, Missouri, and Western Railway Company". Please provide greater detail as to the financial health of this railroad.

ANSWER: Chicago, Missouri & Western Railway (CMW) filed a voluntary petition for reorganization under Chapter XI of the United States Bankruptcy Code in April 1988. The railroad's weak financial condition had deteriorated further so that, as of June 30, 1989, the book value of its assets totalled $78.5 million; and its liabilities were $125 million. During the first six months of 1989, operating expenses ($24.7 million) exceeded operating revenues ($20.3 million).

CMW's major line segments have since been sold. The Commission, by order served September 29, 1989, approved the sale of the railroad's line between St. Louis and Chicago to a subsidiary of Rio Grande Industries for $22 million in cash and the assumption of $7 million of debt. This transaction was consummated in November 1989.

CMW's other major rail line, between Kansas City and St. Louis, was sold to a noncarrier entity in January 1990.

REDUCED FUNDING AND STAFFING LEVELS

SENATOR LAUTENBERG: The statement of Vice Chairman Phillips accompanying the FY 1991 budget justification states that it is the position of the Commission's Managing Director that neither RIFs nor furloughs should be necessary to meet the reduced funding and staffing levels called for in the 1991 budget. Does this continue to be the Managing Director's position?

ANSWER: Neither RIFs nor furloughs should be necessary for the Commission to attain the staff-year limitation of 645 as contained in the FY 1991 President's budget document. FTE staffing is projected to be about 680 at the end of FY 1990. With an average attrition rate of approximately 9 percent, the Commission's current on-board strength level could be reduced through limitations on filling vacancies. If no vacancies were filled (and the vacancies did not interfere with accomplishment of the Commission's mission) the FTE end-of-year level could be reduced to meet the 645 level if the average annual attrition rate continues. Because it is difficult to predict where the vacancies will occur in the Bureaus and Offices or whether they will occur in clerical, technical, professional, or legal positions, the exact impact on the workload in the individual Bureaus and Offices is difficult to predict at this time. The Commission will have to assess the staff-year resources authorized at the time that final action is taken on the Commission's appropriation and possibly request Congressional reprogramming in FY 1991 if that is necessary for the Commission to manage its workload most effectively.

ATTRITION

SENATOR LAUTENBERG: What is the average rate of attrition in a given fiscal year for ICC staff?

ANSWER: The annual attrition (separations and retirements only) rate for the Commission in FY 1989 was 8.9 percent; this is similar to recent fiscal year experience. The annual attrition rate in FY 1990 will be slightly higher due to the change in the Commission's Chairman and Commissioners, whose terms expired and for whom replacements were confirmed by the Senate.

SENATOR LAUTENBERG: What is the usual rate of attrition as expressed in FTEs for the ICC for the previous three years? What amount of attrition do you expect in FY 1990?

ANSWER: In FY 1987, the Commission's net attrition rate (employee separations offset by employee accessions) was approximately 1 percent (approximately 1.75 FTE). In FY 1988 and FY 1989, the net attrition rates were 3 percent (approximately 12.5 FTE) and 1 percent (approximately 4.5 FTE), respectively. The Commission projects a net attrition rate of approximately 3 percent (approximately 10.5 FTE) in FY 1990.

ON-BOARD STRENGTH

SENATOR LAUTENBERG: What is the current on-board strength in terms of full-time equivalent (FTE) staffing? What do you expect to be the FTE staffing level at the end of this fiscal year?

ANSWER: The on-board strength as of June 11, 1990, is 668, which in terms of FTE staffing equates to 664.2. This does not include personnel recruiting actions stemming from appointment of a new Commission Chairman and the increased Commission focus on enforcement and compliance, increased record building and discovery initiatives, and fulfillment of the Inspector General's mission and staffing as required by law. FTE staffing at the close of Fiscal Year 1990 is projected to be approximately 680.

ATTRITION DISTRIBUTION

SENATOR LAUTENBERG: Has most attrition been concentrated at the higher or lower end of the salary scale in previous years?

ANSWER: The Commission's attrition percentages for FY 1988, FY 1989, and FY 1990 by grade grouping have been distributed as follows:

	FY 1988	FY 1989	FY 1990*
Clerical/Technical (GS-7 and below)	45%	49%	32%
Mid-level (GS-8 to GS-12)	25%	21%	24%
Journeyman/Professional (GS-13 and above)	30%	30%	44%
	100%	100%	100%

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*As of June 13, 1990.

FUNDING LAPSE

SENATOR LAUTENBERG: What amount of money, if any, do you anticipate lapsing at the end of FY 1990? What is the cause of this lapse in funds?

ANSWER: The Commission anticipates that several hundred thousand dollars will lapse at the end of FY 1990. This lapse in funds will be due primarily to personnel compensation and benefit cost savings resulting from the Commission's unfilled vacancies. However, the Commission has used a portion of the lapsed personnel cost savings for employee morale supportive benefits, such as supplemental training needs to compensate for deficient areas and small personal computer equipment purchases to improve employee productivity.

SENATOR LAUTENBERG: Will the lapse at the end of the fiscal year that you now anticipate alter at all your budgetary requirements for FY 1991?

ANSWER: The Commission's anticipated FY 1990 funding lapse will have no impact on its resource needs for FY 1991 since FY 1990 funding was projected at a higher staff-year level than was realized.

STAFFING FOR COMMISSIONERS AND THEIR OFFICE

SENATOR LAUTENBERG: Vice Chairman Phillips, in her statement accompanying the budget justification, notes that, in the event RIFs or furloughs should be necessary, she would prefer that the Chairman and each sitting Commissioner accept a one staff-year reduction in the number of positions allotted to their Office. What has been the history with the number of staff-years allotted to each of the Commissioner's offices?

ANSWER: In terms of recent history, through FY 1984, the Chairman's Office was allotted a total of 10 staff-years; each Commissioner's Office was allotted 8 staff-years. In FY 1985, Congress decreased the Chairman's total staff-year allotment to 7 and the other Commissioners' staff-year allotments to 6.

SENATOR LAUTENBERG: What changes have been made, if any, in recent years in the staffing levels in the Commissioners' offices?

ANSWER: Since FY 1985 when Congress reduced the total staff-year allotment for the Chairman's Office from 10 to 7 and the staff-year allotments for the other Commissioner's offices from 8 to 6, staffing has remained relatively stable in each Office.

SENATOR LAUTENBERG: Has there been any discussion regarding altering the amount of staff-years allocated to each office for FY 1990 or FY 1991?

ANSWER: In their review of FY 1990 and FY 1991 staffing issues, a majority of the Commission decided to defer making any changes to the Commissioners' staffing levels until an analysis of work flow changes in the Bureaus and Offices is completed.

OMB PASSBACK

SENATOR LAUTENBERG: Commissioner Simmons and Commissioner Lamboley, in their statement accompanying the budget, note that OMB imposed a reduction of 56 staff-years below the level the Commission determined this past July to be necessary to meet the Commission's statutory responsibilities for FY 1991. Please provide a table detailing from where those 56 staff-years were taken, comparing the staff-year allocations originally proposed in July, the changes proposed by OMB, and the resulting staffing distribution request for your final FY 1991 budget request.

ANSWER: The requested information is displayed in the table below.

FY 1991 STAFF-YEARS

BUREAU/OFFICE	OMB BUDGET REQUEST	OMB PASSBACK	CONGRESSIONAL REQUEST
COMMISSIONERS	47	43	44
SECRETARY	82	76	76
GENERAL COUNSEL	25	23	23
PROCEEDINGS	111	102	102
HEARINGS	5	5	5
PUBLIC ASSISTANCE	14	13	13
TRANSPORTATION ANALYSIS	27	25	24
ACCOUNTS	60	55	55
TRAFFIC	59	54	54
COMPLIANCE AND CONSUMER ASSISTANCE	197	181	181
MANAGING DIRECTOR	74	68	68
TOTAL	701	645	645

PROPOSED RESOURCE REDUCTIONS

SENATOR LAUTENBERG: Commissioner Simmons and Commissioner Lamboley state that the budget request for a reduction in dollars and staff years "appears designed to result in fiscal sunset of the agency". How does the majority of the Commission respond to that assertion?

ANSWER: The entire Commission has mixed views concerning this statement. Commissioners Simmons and Lamboley continue to support the accuracy and validity of the statement as it concerns the continuing reduction in Commission resources over recent years.

Chairman Philbin and Commissioner Emmett have been at the Commission for only a short period of time and have not experienced one complete budget cycle; therefore, they have not developed any views concerning this statement.

Vice Chairman Phillips agreed to the proposed reductions in funding and staffing at the Commission with the understanding that they were part of a government-wide deficit reduction effort affecting other agencies similarly. She further understood that neither RIFs nor furloughs of Commission personnel were considered likely to be necessary to meet the proposed funding and staffing levels. She maintains her view that the budget proposal will enable the Commission to continue to operate effectively while also contributing to the reduction of the budget deficit.

STAFFING REDUCTIONS

SENATOR LAUTENBERG: What offices are anticipated to have larger staffing levels than the current on-board strength?

ANSWER: The Commission anticipates expanding the roles of the Chairman's Satellite Offices, the Office of the Secretary, the Office of Hearings, the Bureau of Traffic, and the Office of Compliance and Consumer Assistance. The increased focus in the Satellite Offices of Congressional Affairs and External Affairs will be directed primarily towards improving relations with and assisting the Congressional committee members and staff concerning transportation regulatory issues; providing improved relations with State and local agencies and the public concerning proceedings pending before the Commission and general transportation areas under the Commission's jurisdiction; and assisting Federal agencies and transportation trade groups by providing more timely and focused information concerning the transportation regulatory issues before the Commission. The Satellite Office of Inspector General will be expanded to address the independence, objectivity, and effective fulfillment of the IG responsibilities as defined in the GAO report on "OIGs at Designated Federal Entities."

The Office of the Secretary will require an expanded role to allow it to continue to timely process incoming filings, briefs, authority and other finance applications, and to provide timely clearance and issuance of Commission decisions and related matters.

The role of the Office of Hearings is expected to be enhanced to provide more local access to the parties in Commission proceedings and an increased role in case discovery and evidentiary factfinding.

The Bureau of Traffic will have an increased workload as the Commission directs more attention to the implementation of an electronic tariff filing system that will adequately meet the requirements of shippers, carriers, and the general public. Additionally, during the transition period, electronic filings must also be filed in printed form, and the staff will be required to review both types of filings.

The Commission anticipates expanding the emphasis in the Office of Compliance and Consumer Assistance especially related to compliance and enforcement areas affecting Commission regulations. While these areas are mainly discretionary workload areas, an increased focus will provide a level of compliance as desired by Congress.

The Commission will attempt to address the increased level of resources for these areas through the proposed reorganization and reprogramming.

SENATOR LAUTENBERG: In your staff-year summary by program and carrier type, the most significant staff reductions below previous levels appear to be in the freight area. What is the rationale behind this reduction? What criteria, if any, were brought to the consideration of which areas would experience staffing reductions and which would be maintained?

ANSWER: The Commission anticipates that the majority of the motor staff-year reductions will occur in the motor freight area. The major portion of this staff-year reduction from FY 1989 to FY 1991 is expected to occur in three offices: the Office of the Secretary, the Office of Proceedings, and the Office of Compliance and Consumer Assistance. In both the Offices of the Secretary and Proceedings, the motor freight staff-year reduction is partly attributable to the staff-year savings directly related to the newly simplified and recently implemented non-rail temporary and permanent authority application, which will allow these two Offices to process the applications more quickly and easily. The remaining motor freight staff-year savings are projected to be attributable to simplified procedures in the motor finance area and a lower number of anticipated motor cases and decisions.

In the Office of Compliance and Consumer Assistance, the reduction of motor freight activity is directly related to the staff-year resources contained in the FY 1991 budget estimate. Most of this staff-year and workload reduction will occur in discretionary workload areas affecting compliance and enforcement such as fitness reviews, compliance surveys, special projects, preliminary and final investigations, and litigation. The Office will attempt to handle those critical compliance and enforcement workload areas with the staff-years provided.

GENERAL MANAGEMENT AND ADMINISTRATION

SENATOR LAUTENBERG: Under general management and administration, you show a decline of five staff-years. What is the current staffing level corresponding to that category, and what will be the impact of this decline of five staff-years?

ANSWER: The Commission has 78 employees assigned to general management and administration. To achieve the proposed FY 1991 general management and administration staff-year level, two staff-years must be eliminated in the Office of the Managing Director, and the two additional staff-years planned for reprogramming to the Office of the Inspector General must be eliminated. The impact of staffing reductions in the Office of the Managing Director will have to be largely offset by the productivity improvements that have accompanied recent computerization efforts in this area. The reduction in the Inspector General's staff may compromise the Inspector General's independence and objectivity and may not permit effective fulfillment of IG responsibilities as defined in the "Inspector General Act" (GAO Report No. AFMD-90-46, OIGs at Designated Federal Entities).

RATIONALE FOR OMB STAFFING REDUCTIONS

SENATOR LAUTENBERG: Was the determination as to which area should experience staff-year reductions considered by program area and carrier type, or was it done by office? What criteria were used to determine which Bureaus and Offices should experience staffing reductions?

ANSWER: The staffing reductions by Bureau and Office were determined by OMB and agreed to and voted on by a majority of the Commission. The Bureau and Office allocations have resulted from a straight across-the-board reduction of about 9 percent.

SENATOR LAUTENBERG: What reprogramming requests, if any, should the Committee anticipate in regard to the distribution of staffing levels between offices for FY 1990? When should we expect to see this or any other reprogramming requests?

ANSWER: The Commission expects to submit an FY 1990 reprogramming request that will address the distribution of staff-years under the proposed reorganization of Bureaus and Offices and revised staff-year requirements, after the Commission's July Budget Conference.

PERSONAL COMPUTERS

SENATOR LAUTENBERG: Your budget justification cites the Commission's efforts to expand the use of computers agency-wide to "enhance output capabilities". What have been the cost savings, if any, resulting from the increased use of computers?

ANSWER: In FY 1988, the agency awarded a contract to buy computers to replace its out-of-date MICOM word-processing system and to expand the use of computers agencywide at a cost of $1,573,800 for the computer equipment and associated software and training. At the same time, the number of staff-years was dropping. From FY 1989 to the end of FY 1990, the on-board staffing was reduced by 28 with a savings of approximately $1.4 million in personnel costs and benefits. Although it is difficult to place a dollar amount on cost savings, even with a decreasing staff, the agency's use of computers has resulted in maintaining and improving the handling of workloads with more efficient staff-year usage; better analyses; computerization of manual or paper-based operations resulting in more knowledgeable responses to inquiries and more timely processing of documents; electronic tariff filing capabilities; and a more up-to-date, skilled workforce with higher morale as a result of increased training and skills.

SENATOR LAUTENBERG: Have the cost savings resulting from the use of computers outpaced the dollar requirements for implementing and maintaining these computer capabilities?

ANSWER: The Commission purchased 279 computers to replace 91 MICOM's and to expand the agency's use of computers at a total cost of $1,370,700 for the computer equipment and software plus $203,100 for training. Each computer costs approximately $4,900, including software and peripheral equipment. The Commission has a maintenance contract for computers of $52,000 or $186 per computer per year. The average staff-year cost for FY 1990 is approximately $49,900 for personnel costs and benefits. The costs for purchase and maintenance of these computers ($1.4 million) for the agency have been an efficient use of resources that has contributed to a decline in the number of staff-year authorizations (28 FTEs) and improvements in workload management.

OFFICE OF THE INSPECTOR GENERAL

SENATOR LAUTENBERG: Why has the Commission only allocated one staff-year to the Office of the Inspector General?

ANSWER: Present Office of the Inspector General staffing was the result of management decisions made prior to Chairman Philbin's appointment. The Chairman recognized that reliance on detailed staff impaired the Inspector General's (IG) independence and, in April 1990, authorized the immediate hiring of an auditor and a secretary. GAO subsequently affirmed the Chairman's opinion of this situation in its report on the implementation of the IG Act. The Senate Committee on Governmental Affairs has also expressed concern over this situation in a recent letter to the Chairman.

An auditor will become part of the staff on June 25, 1990. The vacancy announcement for the secretarial position will close on June 22, 1990. The Commission is currently reviewing additional IG budgetary requests for the Fiscal Years 1991 and 1992.

SENATOR LAUTENBERG: What areas is the Inspector General currently investigating, and what areas does the Inspector General intend to look into in the future?

ANSWER: The IG is currently conducting a survey of ICC Billing/Collection procedures (user fees, fines, et al.) as requested by management during the audit planning process. The IG is also conducting two investigations, both involving violations of our Canons of Conduct.

Upon completion of the Billing/Collection Survey, the IG will immediately begin a review of procurement operations. This review was also requested by management in recognition of the fact that this inherently high-risk area has not been reviewed in several years.

Future reviews may cover any of over 200 diverse activities undertaken by the Commission such as:

effectiveness of the revised OP-1 operating authority application form;
efficiency of our application processes;
payroll cross-servicing agreement with EPA;
travel vouchers;
budget execution;
ADP contingency plans;
quality control over independent public accountant audits of transportation entities;
building security;
enforcement effectiveness; and
electronic tariff filing.

The IG produces an annual audit plan by subjecting the Commission's activities and functions to the following criteria:

management's vulnerability assessments;
age or lack of prior audits;
dollar amounts at risk;
risk of public or congressional criticism;
risk of fraud, waste, or abuse;
requests for audits from management;
requests for audits from the Chairman or Commissioners;
requests for audits from Congress;
central government requirements (e.g., OMB);
history of past problems;
age of programs or procedures;
benefits to be gained; and
cost effectiveness.

The resulting plan lists the areas most at risk. Those elements of the plan not reviewed in a given year receive high priority in the following year's planning process.

Investigations are initiated as warranted by receipt of internal or external complaints or leads developed during audits regarding allegations of fraud, waste, or abuse in Commission operations.

SENATOR LAUTENBERG: Please provide a summary of all significant findings and the status of recommendations issued by the Inspector General to date.

ANSWER: Significant Findings and Recommendations: In Fiscal Year 1989, an audit of the Commission's vendor payment process revealed material noncompliance with the provisions of the Prompt Payment Act. Many of the detailed corrective actions recommended were to be accomplished through the issuance of both desk procedures and an Administrative Issuance on Prompt Payment. The issuance, completed with technical assistance from the IG, was distributed on February 12, 1990. Commissionwide training was conducted by May 1990. The desk procedures are in draft, and one final adjustment to a PC-based tracking application remains to be made.

The ongoing billing/collection survey revealed that no debt collection efforts beyond initial billing had been undertaken on approximately $440,000 of user fees due the Commission. The control failure also resulted in the Commission's foregoing the related penalties and interest that could have been assessed on this debt to date. The IG made an interim recommendation that a "work-out" group be formed to collect this debt while basic flaws in the collection process are being corrected. Management immediately took action to collect the debts and correct billing deficiencies and also detailed a management analyst to the IG to provide additional assistance on the survey. The IG anticipates providing recommendations for complete restructuring of the collection process and will provide technical assistance to management as they install needed controls. Management has consistently provided immediate response to all other audit findings and recommendations.

DECISIONS

SENATOR LAUTENBERG: According to your budget justification, the Commission reached more than 1,200 decisions, including adjudications, rulemakings, and investigations in administrative matters, during FY 1989. Please provide a table outlining the number of decisions broken down into these several areas and compare them to preceding years, beginning in 1987, and the anticipated level of decision-making for FY 1990.

ANSWER: The following table outlines the various decisions issued by the Commission in Fiscal Years 1987, 1988, and 1989 and anticipated FY 1990.

	FY 1987	FY 1988	FY 1989	FY 1990
Adjudications	1,124	1,036	1,037	1,000
Rulemakings	121	86	89	90
Investigations	12	31	8	5
Administrative Matters (undocketed)	73	67	64	60

The Commission is undertaking a new, broad investigation including rate bureau pricing issues which will soon be instituted in Ex Parte MC-196, Investigation of Motor Carrier Collective Ratemaking and Related Procedures and Practices. The impact of this investigation on staff resources cannot be addressed at this time because the scope of the proceeding has not yet been determined by the Commission.

MOTOR CARRIER LICENSING

SENATOR LAUTENBERG: Why does the Commission anticipate that the licensing workload in the motor carrier area is likely to stabilize at the FY 1989 level?

ANSWER: The projection is based on licensing activity over the past few years, including our experience through the first half of FY 1990. In addition, simplified procedures for transferring operating authority continue to hold down the need for new authority.

COMMISSIONERS AND THEIR OFFICES

SENATOR LAUTENBERG: In the Offices of the Commissioners, an increase to $29,000 is requested for travel. What personnel and what types of travel will take place in FY 1991 that did not take place in FY 1990 due to a lower level of resources?

ANSWER: The travel request of $29,000 is the same as requested in the Commission's FY 1990 President's budget. While travel requirements for the Commissioners have remained essentially unchanged, additional travel in FY 1991 may be necessary for the Satellite Offices particularly to perform more Inspector General investigations and audits in the regions and to perform more EEO training with regional managers and supervisors.

SENATOR LAUTENBERG: Please provide a table outlining the amount of travel and cost of travel for each Commissioner's office in FY 1989?

ANSWER: The following table shows the amount of travel by each Commissioner's office and the cost:

OFFICE	TRIPS	COST
Chairman Gradison	6	
Staff	1	$ 4,700
Vice Chairman Phillips	3	
Staff	1	3,500
Commissioner Simmons	4	
Staff	2	7,100
Commissioner Lamboley	7	3,700
Commissioner Andre	1	
Staff	2	2,300
Sub-total	27	$21,300
Inspector General	1	$ 600
Human Relations	1	200
Government and Public Affairs	9	5,000
Total	38	$27,100

SENATOR LAUTENBERG: Please provide data on any costs incurred in this or any other part of the ICC budget for meals, either for the Commissioners or other ICC staff. Please note the amount of meal costs by office with a brief explanation of these meal costs.

ANSWER: The Commission does not expend any funds for meals for the Commissioners or other Commission staff other than those included in conferences and seminars, where the cost of the meals are included in the conference fees; in incentive awards programs, where the token costs of refreshments would materially enhance the effectiveness of the ceremony (5 U.S.C. 4503 and 65 Comp. Gen. 738); and in the Commission's Official Reception and Representation Expenses. The Official Reception and Representation Fund is authorized $1,500 annually by the appropriations act and is used primarily for improving communication and understanding between the Commission and any one or a number of external groups and organizations and for the Chairman or official designee of the Chairman to represent the Commission as a speaker or honored guest when a payment by the sponsoring group might be considered a violation of the Commission's Canons of Conduct.

The Commission has maintained a small kitchen and dining room for the use of the Commissioners for many years. All participating Commissioners contribute to a private fund used to purchase groceries and other supplies required for the preparation of the meals. The Commission is currently evaluating the use of this facility and its continuation.

SENATOR LAUTENBERG: Were any funds in FY 1989 used for limousine services for any of the Commissioners or ICC staff? If so, please explain the circumstances of the use of limousine services.

ANSWER: The Commission has not contracted for or expended any funds for limousine services for any Commission employee during FY 1989 or any recent fiscal year. The Commission does maintain two headquarters cars (with no dedicated driver) for transportation requirements of the Chairman, Commissioners, and other Commission staff for the purpose of attending local conferences and meetings, congressional hearings, and for other administrative matters such as delivery of fiscal and payroll materials to Treasury.

ISSUED DECISIONS

SENATOR LAUTENBERG: The budget justification notes that the Office of the Secretary issued 73,000 decisions of the Commission, its administrative law judges, and employee boards in FY 1989. Please provide a breakdown of the number of decisions in each of these areas for 1989, and compare them to the numbers for the preceding two fiscal years and the anticipated level for FY 1990.

ANSWER: The following table describes the issued decisions for Fiscal Years 1987, 1988, 1989 and anticipated FY 1990.

	FY 1987	FY 1988	FY 1989	Projected FY 1990
Entire Commission	1,153	1,034	958	900
Chairman	115	119	75	80
ALJ's	174	101	40	100
Employee Boards	29,029	58,986	57,662	54,100
Authorities*	11,561	12,191	12,919	15,100
Environmental	N/A	68	114	40
Director's Decisions	823	852	1,155	1,130

* Authorities are permits, licenses, and certificates.

FILING AND USER FEES

SENATOR LAUTENBERG: The Office of the Secretary collected $4,762,562 in filing and user fees in FY 1989. What particular user fees generate what portion of this figure, and how have these levels compared to the two preceding fiscal years and the anticipated level of revenue for FY 1990?

ANSWER: In FY 1989, user fees collected in application proceedings generated 62 percent of the Commission's fee collections. The filing fees for tariffs and rail contracts accounted for 26 percent, and 11 percent was generated from fees for acceptance of motor carrier and broker insurance policies. Miscellaneous receipts for items such as copying and certifying records made up the remaining 1 percent of fees collected. These percentages are comparable to the breakdown for the two preceding fiscal years.

The anticipated percentages for FY 1990 are 68 percent for application fees; 25 percent for tariff and contract fees; 6 percent for insurance fees; and the remaining 1 percent for miscellaneous fees. These slight changes are the result of the increases in application fees associated with the filings made by Mexican companies seeking certificates of registration, the increased fees as a result of the 1989 update of the fee schedule, and the projected decrease in insurance filings.

OFFICE OF THE SECRETARY

SENATOR LAUTENBERG: On page 32 of your budget justification, you cite the distribution of staff-years to the three major functions of the Office of the Secretary. Have these percentages changed significantly in recent years? If so, how?

ANSWER: Over the past three fiscal years, there have been no significant changes in the distribution of staff-years. The percentages for case control activities have fluctuated within 2 percent; applications and fees have fluctuated within 2 percent; and insurance and docket activities have remained stable. All other remaining activities have fluctuated by no more than 3 percent.

SENATOR LAUTENBERG: The workload summary for the Office of the Secretary shows a dramatic reduction over three years in the area of indexing court proceedings in the motor area. What is the rationale behind this significant reduction, and what is its effect?

ANSWER: The number of proceedings going to court has declined, therefore fewer indices need to be compiled. This reduction in the number of court cases is due to the preliminary review given the decisions before they are released. The reduction in the number of indices required has allowed the staff time to compile more thorough indices eliminating the necessity of submitting supplemental indices. The decrease in the workload has also allowed the staff to become involved in special projects (such as preliminary contact with account holders concerning delinquent collection accounts) and cross-training.

SENATOR LAUTENBERG: The workload summary also shows a continued reduction of about 1 million a year in printing workload in the motor area. What items were printed in 1989 that will not be printed in 1990 and/or 1991?

ANSWER: The proposed reduction in the printing workload is the result of the anticipated reductions in the workloads associated with the revocation process, the number of issued decisions, and the number of authorities issued which require reproduction.

OFFICE OF THE GENERAL COUNSEL

SENATOR LAUTENBERG: For the Office of the General Counsel, your justification states that the office received roughly 30 formal and informal requests for opinions a month. How does that average for FY 1989 compare to preceding years?

ANSWER: The average for FY 1989 represents an increase over prior fiscal years and reflects a general upward trend in the number of opinions handled by this Office. For FY 1985 through the first half of FY 1990 the monthly averages were 25, 26, 31, 29, 32, and 33, respectively. In addition to responding to requests for opinions, this Office initiates advice memoranda in cases that are in litigation. When these opinions are added, the monthly average rises to 37 in FY 1989 and 39 in the first half of FY 1990.

SENATOR LAUTENBERG: Your workload summary for the Office of the General Counsel shows absolutely no changes in any area on the table from FY 1990 to FY 1991. Did this anticipated workload summary result from a comprehensive review of workload expectations for Fiscal Year 1991, or did you simply assume the same level of effort in all areas without a comprehensive review?

ANSWER: We assumed the same level of workload for FY 1991 as for FY 1990, without making any further predictions. It is difficult to predict what issues will become controversial from year to year. Our experience has been that unforeseen questions of law will arise, become hotly contested, generate numerous court cases, and then gradually diminish in importance as the courts settle the issues. As the first issue becomes less controversial, a new issue will take its place. Thus, for example, while we predicted in our budget justification a decrease in motor opinions and litigation with the end of the Greyhound-Trailways generated finance cases, the recent, unforseen bankruptcy of Greyhound is likely to generate much additional work in this area. Because our predictions for FY 1990 and FY 1991 are based on the same historical data (FY 1989), and because experience teaches us that new, unforeseen issues will arise to replace resolved, old issues, we have used the same projections for both years.

SENATOR LAUTENBERG: Your budget justification states that in the Office of the General Counsel, "a decrease is . . . expected after FY 1989 in motor opinions and litigation, with the end of Greyhound-Trailways generated finance cases." Why, if you are expecting a decrease in this major case area, are there no changes reflected on the workload summary for the Office of the General Counsel?

ANSWER: The workload summary does reflect a projected decrease in the area of motor finance litigation. These cases are projected to fall from 10 items in FY 1989 to two items in FY 1990 and FY 1991. We did not predict a decline in opinions because of our general experience that new issues will arise that will take the place of settled issues. Greyhound's recent bankruptcy petition, an unforeseen event, is already generating opinion work for this Office. Indeed, our actual experience for the first half of FY 1990 suggests that our opinion workload in motor finance cases for FY 1990 will be higher than predicted. In the first half of FY 1990, we have already rendered 5 motor finance opinions, the number that we had predicted for the entire year; we now project 10 motor finance opinions for the year.

Our workload summary also predicts a decline in motor rates opinions from 29 items in FY 1989 to 21 items in FY 1990 and FY 1991, as well as a decline in motor carrier rates litigation from 58 items in FY 1989 to 30 items in FY 1990 and FY 1991. Significantly, our actual experience for the first half of FY 1990 shows 27 rates opinions and 25 litigation items. Thus our FY 1991 budget estimates have substantially understated our workload in these areas.

SENATOR LAUTENBERG: How are travel funds utilized in the Office of the General Counsel? While the amount of travel funding requested in FY 1991 is just slightly above that for 1989, it is considerably above the level anticipated to be utilized in 1990. What types of travel will take place in 1991 compared to 1990 by which personnel?

ANSWER: Travel funds are used for court appearances by our staff attorneys when they represent the Commission before various

U.S. Courts. We also send one attorney to the annual meeting of the Administrative Conference of the U.S. Court of Appeals for the D.C. Circuit and, occasionally, members of the Office travel to address industry or bar association meetings. It is difficult to predict from year to year the percentage of lawsuits that will be filed locally and those which will require travel to courts in other jurisdictions. Although the $8,000 in travel costs projected for FY 1990 represented a $5,000 reduction from the FY 1989 actual, actual FY 1990 to date travel expenses have been higher. For the first 8 months, this Office incurred $6,600 in travel costs, and we expect to exceed the FY 1990 projection. We anticipate that the travel funds will be expended for the same litigation purpose and by the same personnel in FY 1991, but that the expenditures will conform to historical (FY 1989) levels, adjusted for inflation.

CROSS-TRAINING

SENATOR LAUTENBERG: In the Office of Proceedings, your justification states that the Office has a program of cross-training motor attorneys to handle rail work. Are there other areas in the ICC where specialized staff have been newly trained in other mode areas to maximize their utility?

ANSWER: The Office of Compliance and Consumer Assistance conducted intermodal training in the early 1980's for all of their investigators. The Office of the Secretary has conducted a cross-training of job functions between appellate briefings and recordations and between insurance and application processing to provide backup support in periods of workload peaks. The Office of Public Assistance completed cross-training of all personnel by the end of FY 1989. We are currently reviewing the entire training program for the agency including cross-training.

OFFICE OF PROCEEDINGS

SENATOR LAUTENBERG: The justification states that the Office of Proceedings processed over 15,000 applications within statutory deadlines. Does this statement mean that all applications for such authority were granted within the statutory deadlines? Do you anticipate that all such applications will be processed within the statutory deadlines in the future?

ANSWER: Virtually all applications for motor carrier operating authority, whether they were granted, denied, or rejected, were processed within the initial 180-day statutory deadline. (A handful of cases each year may require a short extension of the deadline.) The applications that are denied or rejected involve carriers with deficient safety records. We anticipate the same results in the future.

SENATOR LAUTENBERG: In the workload discussion for the motor area for the Office of Proceedings, you state that, under your simplified procedures, any added filings should not pose a staffing problem. What simplified procedures are these, and how will the anticipated level of staffing be capable of handling any increase in the number of filings.

ANSWER: The simplified procedures are contained in the new OP-1 application form that goes into effect on June 15, 1990. This form has a "check-the-box" format that should make handling applications easier and faster. The new form was designed to eliminate many time-consuming questions raised under the old form. Thus, staff should be freed to handle any increase in applications. However, we are not expecting a material increase in filings.

SENATOR LAUTENBERG: The workload summary for the Office of Proceedings shows a significant increase in the motor area for rate complaints, investigations, and rate-related exemptions from FY 1989 to FY 1990. What, in your view, contributed to this increase?

ANSWER: This workload increase is directly attributable to undercharge cases filed against shippers by bankrupt motor carriers. These cases are either referred to the Commission by the court or are brought to the Commission directly by the shipper. These cases arise because carriers quoted rates, billed these rates to the shipper, and collected payment at the quoted rates but failed to file these rates at the Commission. Years later, the carrier goes bankrupt, and the trustee seeks to collect the difference between the rate on file at the Commission and the negotiated rate. The Commission is expecting a decision from the Supreme Court by the end of June 1990 that should determine whether this sudden increased workload will persist.

SENATOR LAUTENBERG: In the same area, you are showing a significant decrease in the number of rate bureau investigations, from 14 in 1989 to 6 in 1990. You expect a level of 4 in 1991. What is the rationale behind this decline in the number of investigations?

ANSWER: The reason for this decrease is that the Commission is almost finished with the review of rate bureau agreements required by the Motor Carrier Act of 1980. There were 36 rate bureau agreements, and a number of decisions were required for each one.

In the rulemaking workload area, the Commission is undertaking a new, broad investigation including rate bureau pricing issues which will soon be instituted in Ex Parte MC-196, Investigation of Motor Carrier Collective Ratemaking and Related Procedures and Practices. While this proceeding will be staff intensive, sufficient resources are available in the Office of Proceedings to fulfill this commitment with existing staff.

SENATOR LAUTENBERG: In the rail workload area for the Office of Proceedings, you show a significant decline in the number of rate complaints, declaratory orders, and investigations. What contributed to this decline?

ANSWER: We projected a decline in this area based on a drop in the number of decisions issued in the first half of FY 1990 projected for the full year, compared to the number of decisions issued during the prior fiscal year. This reduction reflected a steady decline in the number of new rate cases filed at the Commission following the enactment of the Staggers Rail Act in 1980 and the continuing reduction of the older case backlog.

SENATOR LAUTENBERG: You also show the number of certificates under 10901 applications and exemptions declined by half from FY 1989 to FY 1990. What contributed to this decline?

ANSWER: The transfer of rail lines under a class exemption from section 10901 from Class I railroads to new corporations formed to buy these lines became one of the most notable phenomena of the rail industry in the mid-1980's. These transfers took place without the imposition of conditions to protect affected employees, since the Commission exercised its discretion to impose these conditions only in exceptional circumstances. In the face of considerable labor opposition and the Supreme Court's ruling in the Pittsburgh and Lake Erie case, use of section 10901 has declined considerably. Those rail line transfers that do go forward typically are for shortline segments, and apparently do so on the basis of agreements between labor and management.

SENATOR LAUTENBERG: You expect the number of large intermodal merger and consolidation applications in the anti-trust area to almost triple in 1990. To what do you attribute this change?

ANSWER: The Commission's experience during the past several years has been that at any one time it will have two large mergers or acquisitions pending before it, such as the Union Pacific's acquisition of the Missouri-Kansas-Texas or the Santa Fe's proposed acquisition of the Southern Pacific. Each one of these cases typically requires the Commission to issue between 10 and 20 decisions on various aspects of the case. FY 1989 did not follow that pattern. In projecting the caseload in this area for FY 1990, we followed the pattern that has prevailed through most of the past decade.

SENATOR LAUTENBERG: For the Office of Proceedings, please explain the request for increased travel funds above 1990. Your request for 1991 is five times the amount of travel utilized in 1989. Who is performing this travel and for what purposes?

ANSWER: The Office of Proceedings originally requested $6,000 for travel in FY 1990. This amount was reduced to $3,000 as part of the Commission's cutbacks to meet the Gramm-Rudman-Hollings target. Therefore, the actual real difference from our FY 1990 Congressional request of $6,000 to the FY 1991 request of $5,000 is a reduction of $1,000. The funds are expected to be used by the Director, Deputy Directors, and other staff members to attend seminars and conferences and to visit transportation facilities in connection with Commission proceedings.

OFFICE OF HEARINGS

SENATOR LAUTENBERG: In the Office of Hearings, you state that a major accomplishment for 1989 was the completion of action on the remainder of the original 900 Staggers Rail Act Section 229 rail rate complaint cases. What effect will this have on the workload requirements in the Office of Hearings?

ANSWER: The Office of Hearings is assigned all formal complaint proceedings filed with the Commission except those requiring an immediate policy decision of the entire Commission. The Office is assigned abandonment applications and other proceedings which are placed under investigation and require a local hearing or other hearing procedures. The Office is assigned all formal proceedings where the parties are in need of a settlement judge. The Office also is assigned discovery disputes arising in all formal Commission proceedings. These functions, while not new, are being reasserted for the purpose of achieving greater efficiency and better Commission performance.

VICE CHAIRMAN PHILLIPS, commenting: While I recognize the importance of the work performed by the Office of Hearings, I am concerned that this office increasingly is being assigned duties which properly should be performed by the entire Commission. Likewise, I am concerned that our recently increased reliance on investigations and local hearings in abandonment and other proceedings, where a written record clearly would be sufficient to ensure that all parties' positions are accurately represented before the Commission, will not only complicate and delay the process, but will result in unnecessary expenditures of scarce budget resources.

COMMISSIONER SIMMONS, commenting: I support the increased assignment of cases to the Office of Hearings. I also would support an increase in the number of Administrative Law Judges. Until recently, few legitimate requests for oral hearing were granted principally because staff could not control or predict the outcome of an ALJ's decision. The Commission has now repudiated this policy by assigning cases to Hearings on a more frequent basis.

I would point out that based upon my experience, use of local hearings has aided the Commission in its deliberations. An ALJ is able to thoroughly question the parties regarding issues or points raised. The record tends to be more complete and revealing because of an oral hearing. Moreover, public participation increases when local hearings are conducted. Furthermore, the Commission is now assigning cases to Hearings because of Congressional requests, particularly in abandonment proceedings. From this, we see a clear Congressional intent that the public interest is best served by local hearings.

SENATOR LAUTENBERG: The Office of Hearings was one of the few areas that saw an increase in its travel budget from 1989 to 1990, and the level requested for 1991 is four times that amount utilized in FY 1989. Please provide a justification for the increased travel in the Office of Hearings. What staff is doing what sort of travel with these funds.

ANSWER: The Office of Hearings' administrative law judges incur travel expenses only in connection with local hearings. It is the decision of the Commission to provide localities with an opportunity to more fully participate in Commission processes. As a result, administrative law judges are expected to meet local needs for public hearings.

OFFICE OF PUBLIC ASSISTANCE

SENATOR LAUTENBERG: In the Office of Public Assistance, your justification notes that the office reviewed 350 draft motor filings prior to formal submission to the Commission, assisted 1,027 participants in rail commission proceedings, and responded to 16,537 inquiries from the public regarding Commission practices and policies. Please compare those figures for the two preceding fiscal years, as well as your anticipated levels in each of these areas for FY 1990.

ANSWER: The Office reviewed 86 motor filings in FY 1987. In FY 1988, following the consolidation of many Commission offices and duties, that number rose to 297 and in FY 1989 to 350. The new simplified procedures initiated in June of 1990 should result in a drop to 300 in the number of motor applications that will require review by the Office. In FY 1987, assistance was furnished to 623 participants in rail proceedings and 885 participants the following year. Due to the increase in opposition in various rail cases, 1,027 participants sought counseling in 1989. The Office projects approximately 1,000 rail proceeding participants will request assistance during FY 1990. Inquiries relating to Commission practices and procedures numbered 14,229 in FY 1987 and 14,793 in FY 1988. The volume of such inquiries increased to 16,536 in FY 1989 and is expected to reach nearly 17,000 in FY 1990.

SENATOR LAUTENBERG: The Office of Public Assistance anticipates a tapering off in the number of passenger service and motor carrier related requests over the next two years, with the use of the new OP-1 form. Who will use these forms and for what purposes?

ANSWER: The OP-1 form is used by all non-rail applicants to apply for emergency temporary, temporary, or permanent authority, or a combination of such authorities. These applicants, which account for the majority of filings before the Commission, consist of motor freight and passenger carriers, property brokers, water carriers, and household goods freight forwarders.

SENATOR LAUTENBERG: How will its use result in a decrease in the number of requests to the office?

ANSWER: Unlike the old application forms, the instructions accompanying the new OP-1 form are complete and written in layman's terms. No supplemental information is required for applicants to prepare adequate filings. Equally important, the new form is designed so that applicants need only check boxes instead of inserting narrative statements and long explanations. Also, applicants are no longer required to submit separate verified statements and caption summaries. Because of this streamlined process, the Office anticipates a decline in the number of requests for clarification of application filing procedures and rules.

SENATOR LAUTENBERG: Your workload summary for the Office of Public Assistance in the motor area shows a decline in the number of educational and outreach projects from 1989 to 1991. What kinds of projects were executed in 1989 that will no longer take place in 1990 or in 1991? What constituencies do these projects serve?

ANSWER: Prior to availability of the new OP-1 form, all non-rail applicants for temporary authority and new permanent or expanded authority were furnished with written guides to which they referred in order to submit completed filings. The Office prepared and constantly updated these booklets which provided information and instructions not included in the old forms. Publication of these guides terminated on June 15, 1990, when the new OP-1 became effective, accounting for the decline in educational and outreach projects.

SENATOR LAUTENBERG: The Office of Public Assistance experienced level funding for travel from 1989 to 1990, but is requesting additional resources in 1991. What office personnel will use these additional travel funds and for what purposes?

ANSWER: Travel funds are required for attorneys in the Office to assist the public at oral hearings conducted by the Commission. Because of the increased number of hearings held in the latter part of FY 1990 and the public's requests for assistance at these hearings, the Office's authorized travel funds were completely depleted. The Office anticipates the increased number of oral hearings will continue in FY 1991. Therefore, additional travel funds are necessary to assist the public at selected hearings conducted in FY 1991.

OFFICE OF TRANSPORTATION ANALYSIS

SENATOR LAUTENBERG: In the Office of Transportation Analysis, your resource summary table shows a dramatic increase from 1989 to 1991 in the amount of dollars committed to contracts. What criteria are considered in determining what work will be contracted out by the Office of Transportation Analysis versus that which is performed by ICC staff? Please provide a summary giving a brief description of all contracts in the Office of Transportation Analysis for FY 1990 that exceed $10,000, with an explanation as to why this work was contracted out and could not be performed by ICC staff.

ANSWER: As a general rule, the Office of Transportation Analysis (OTA) utilizes contractors either when: (1) a contractor can perform the work more efficiently or more cost effectively than permanent staff, or (2) when the expertise required for a particular project is unique and short term in nature. For example, periodically the Office employs consultants to supplement the staff's analytical capability for a variety of environmental analyses. Such assistance is necessary because the relatively small environmental staff does not always have the specific technical expertise necessary for particular projects. Further, it would not be economical to hire this expertise on a full-time basis since the skills required in one case may be entirely different than those required in another.

The increase in contract funds between Fiscal Years 1989 and 1991 is due to two factors. First, the Waybill Processing Contract lapsed in FY 1988, and a new five-year contract was renegotiated beginning with FY 1989. The new contract was considerably more costly than the previous contract due to the effect of inflation and the increased cost of processing the railroad waybill file. The total cost of the waybill contract is shared equally between the ICC and the Department of Transportation. The second factor contributing to the escalation in contract expenditures for OTA is the unprecedented number of railroad construction cases currently pending or anticipated in FY 1990 and FY 1991. There may be as many as 20 rail line construction projects during the FY 1991-FY 1992 period compared to a previous average of one or two per year. Further, construction cases are environmentally complex and generally require an environmental impact statement rather than an environmental assessment. Finally, many of the issues raised in these cases require specialized expertise related to endangered species/biological assessments, historic and archaeological surveys, Native American Indian Affairs, hazardous waste evaluation, water quality, and verification of engineering data. Due to the unique and nonrecurring nature of the requirement for these types of expertise, it is not cost effective to hire full-time staff in these areas.

Summary of OTA Contracts Over $10,000

There were two OTA contracts over $10,000 for FY 1990. The first was the Waybill Processing Contract. The total amount of this contract is $312,854 which is equally shared with the Department of Transportation. The ICC's share is $156,427. The waybill sample is used within the Commission for cost analysis (required to calculate the cost recovery percentage), proceedings support, and economic research. The sample is the only source of traffic data providing information on: number and type of cars, number of tons, total ton-miles, total car-miles, and car-miles by commodity classifications. These measurements are critical to most rail proceedings and particularly in the calculation of the cost recovery percentage.

A new five-year waybill contract was awarded in January 1989. This contract covers waybill processing for 1989 through 1993. All of the bids received were two to three times the cost of the old contract. We believe that these bids reflect the effect of inflation and increased costs associated with processing the sample. We estimate the cost of processing the sample with Commission staff would exceed $500,000 and over 1,000 hours of computer time.

The second contract in excess of $10,000 was for a Congressionally mandated report to Congress on joint rate and surcharge cancellations in the railroad industry. This is an annual reporting requirement contained in the Staggers Rail Act (Sec. 217 (c)(1)). Since the contractor used for this activity provides similar services to other clients, it can complete the task at a lower cost than can the Commission staff.

COMMISSIONER SIMMONS, commenting: I believe the Commission should reevaluate its continuing reliance on outside contractors to meet many of its responsibilities in the environmental area. It is not clear that the matters usually referred to these contractors are sufficiently complex or unusual as to justify recourse to non-Commission resources. Development of in-house environmental expertise should be pursued, since the ICC's obligations in this area are unlikely to diminish. A fresh look at the practice of contracting out environmental analyses would be desirable.

SENATOR LAUTENBERG: Are there cost savings achieved by contracting out this work versus having the work performed by ICC staff?

ANSWER: We believe that there are significant cost savings in all of the contracting done by OTA compared to the alternative of having staff complete the work. For the waybill contract, there were significant savings not only in staff time, but also in computer resources. The estimated in-house cost of processing the waybill sample is $500,000 plus over 1,000 hours of computer time. The surcharge contract also resulted in savings. At one time this report was prepared internally requiring between .25 and .33 staff-years to complete. This equates to between $18,944 and $25,006. The contractor's price of $10,600 is considerably below the cost of completing the study by ICC staff.

SENATOR LAUTENBERG: Travel funds declined in the Office of Transportation Analysis from 1989 to 1991, but the level requested for FY 1991 is above the amount utilized in 1989, and considerably above the amount utilized in 1990. What additional travel will be executed by transportation analysis staff, and for what purposes?

ANSWER: Travel funds within the Office of Transportation Analysis are used almost exclusively for staff from the Section of Energy and Environment. The increase in our funding request reflects the unprecedented number of construction cases anticipated in FY 1991 and FY 1992. Construction cases often require at least one field inspection to examine the project area and attendant environmental issues. Also, when an environmental impact statement (EIS) is required (which is generally the case in construction), a second trip is necessary to conduct Commission scoping meetings. Scoping is the first stage of the EIS process and is the vehicle to help identify environmental issues, solicit public comment, and define the scope and content of the EIS.

BUREAU OF ACCOUNTS - TRAVEL

SENATOR LAUTENBERG: Travel funding in the Bureau of Accounts declined from 1989 to 1990, but the level requested in 1991 is well above the amount utilized in 1989. What additional travel will be executed by the staff of the Bureau of Accounts and for what purposes in 1991 that was not executed in 1990?

ANSWER: The Bureau of Accounts had originally requested a higher travel allotment for Fiscal Year 1990. The request was reduced as part of the Commission's efforts to satisfy the Gramm-Rudman-Hollings sequester.

Bureau travel is essentially for on-site audits of each Class I railroad. A full audit program consists of visits to finalize audit procedures, to review workpapers prepared by the carriers' public accountants, and to conduct audits of transactions with affiliated companies. In addition, other travel is taken to assist carriers in the preparation of depreciation studies, to participate in meetings with industry on accounting and related matters, and for special audits, as necessary. The $63,000 requested for travel in Fiscal Year 1991 will allow resumption of the full Class I railroad audit program plus other essential travel.

BUREAU OF TRAFFIC WORKLOAD

SENATOR LAUTENBERG: In the workload summary table for the Bureau of Traffic, there are absolutely no changes anticipated in 1991 compared to the levels estimated for 1990. How comprehensive was the review of workload expectations for 1991 that gave rise to this table?

ANSWER: The workload forecasts for 1991 were given thorough consideration. The projections are based on the Bureau's experience over the past several years. Practically all categories of tariff-related activities have fluctuated only slightly or remained static. There are several rate and tariff matters before the Commission that could affect these projections and cause them to increase. Until the Commission reaches conclusions in these matters, however, the impact cannot be determined.

OFFICE OF COMPLIANCE AND CONSUMER ASSISTANCE

SENATOR LAUTENBERG: In your justification for the Office of Compliance and Consumer Assistance, you note the Office's responsibility for reviewing and monitoring the surface transportation industry's compliance with the revised Interstate Commerce Act and Commission regulations. What has been this Office's observation in terms of the greatest vulnerabilities to non-compliance on the part of the transportation industry?

ANSWER: As the cost of acquiring insurance to conduct motor carrier operations increases, the level of noncompliance with the Commission's insurance requirements also rises. Accordingly, the enforcement efforts of the agency have been focused on the problem of uninsured operations by motor carriers, inasmuch as the public is most vulnerable to uncompensated losses due to the increased failure to have the required levels of insurance.

SENATOR LAUTENBERG: What regulations and statutes are being complied with the least, and by what kinds of transportation operators across the U.S.?

ANSWER: The regulations and statutes least complied with are 49 U.S.C. §10927, which relates to the requirement that motor carriers possess the requisite level of insurance and have evidence of that insurance on file with the Commission. Violations of 49 U.S.C. §10927 also violate 49 CFR 1043.1, which relates to insurance. Similarly, violations of 49 U.S.C. §10927 also violate 49 U.S.C. §10922, which requires motor carriers to have authority to conduct interstate motor carrier operations, since a certificate of authority to conduct interstate motor carrier operations is inoperative unless the carrier has complied with the Commission's insurance requirements. The transportation operators that are the subject of most enforcement actions are motor common carriers, which lack the requisite insurance and authority to legally conduct operations. Included in this group are motor passenger carriers, which also lack authority and insurance to legally conduct operations.

ENFORCEMENT CATEGORIES

SENATOR LAUTENBERG: Your justification cites the list of high-emphasis enforcement categories developed by the Commission and distributed to ICC staff in the field. While this list is presented in alphabetical order in the justification, was there any level of importance attached to any one or a number of these areas in the Commission's communication to field staff? Do each of these areas have an equal level of importance in the view of the Commission?

ANSWER: The Commission did not specify that any particular high-emphasis category should receive greater attention. However, because of the concern voiced by the individual commissioners, both publicly and in their votes, with respect to safety issues and financial security, Commission staff has devoted the bulk of its resources to those high-emphasis areas that affect public safety and insurance regulations. Inasmuch as unauthorized passenger carrier operations invariably involve uninsured operations as well, particular attention has been given to seeking a cessation of operations by passenger carriers that do not carry the required insurance to compensate the passengers in the event of an accident.

SENATOR LAUTENBERG: How often are these high-emphasis enforcement areas reassessed by the Commission? Has such a reassessment been done for FY 1990? Is such a reassessment anticipated in the near future?

ANSWER: The categories have not been officially reassessed since they were established some years ago. However, each category is broadly interpreted to allow various types of non-compliance to fall within the parameters of that category. Also, in recent months, the Commission has begun a review of noncompliance practices of transportation entities that might have received less emphasis to determine if enforcement action is appropriate. Notwithstanding the evolution of the enforcement categories, the Commission's Chairman has expressed an interest in reevaluating the enforcement categories in the near future.

SENATOR LAUTENBERG: Your justification in the Office of Compliance and Consumer Assistance cites the variety of enforcement measures which are available against violations of the Interstate Commerce Act, related statutes, and the Commission's regulations. According to your justification, these remedies include non-judicial actions such as written warnings, violation notices that demand immediate compliance, and consent agreements wherein the violators agree, in writing, to cease and desist from further violative practices. Other remedies include court-ordered injunctions, civil forfeitures, and criminal referrals to the Department of Justice. For each of these enforcement mechanisms, please cite the number of such actions for each mechanism for fiscal years 1987, 1988, 1989, and your anticipated levels for 1990. Please also, if possible, provide an estimate for each of these areas for FY 1991. Please indicate on this table what percentage of the numbers cited for each of these mechanisms was in a high-emphasis area as defined by the Commission.

ANSWER: The chart below shows the distribution of cases by enforcement mechanisms. For each mechanism it also indicates the percentage of cases that were in a high emphasis area. Projected estimates for FY 1990 are based on the results of the first two quarters. The reduction in administrative proceedings actions in FY 1990 results from a change in the method the Commission used in processing operating authority applications. We expect that the general distribution of cases shown in the table below will continue in FY 1991.

Distribution of Cases
By Enforcement Mechanisms

	FY 1987		FY 1988		FY 1989		FY 1990	
Case Types	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Criminal	5	100%	11	82%	15	80%	12	100%
Civil Injunctions	71	96%	87	93%	119	98%	146	96%
Civil Forfeitures	16	62%	33	88%	74	96%	66	94%

Administrative Proceedings	206	98%	193	99%	241	99%	24	83%
Consent Agreements	2,192	99%	1,827	99%	1,612	99%	1,598	100%
Violation Notices	22	82%	28	79%	43	98%	54	96%
Transfer to Other Agencies	10	80%	1	100%	0	NA	2	100%
Miscellaneous	1	100%	4	75%	8	100%	12	100%

SENATOR LAUTENBERG: Why are you anticipating a decrease in the number of compliance surveys from 1990 to 1991 in the Office of Compliance and Consumer Assistance?

ANSWER: The compliance survey function is a discretionary work activity, and the reduction in the number of compliance surveys forecast in FY 1991 from FY 1990 corresponds to the reduction of staff-years proposed for OCCA in the Commission's FY 1991 budget submitted to the Congress in January 1990. Under that proposed budget, OCCA's resources would be 181 staff-years in FY 1991, down considerably from FY 1990.

COMMISSIONER SIMMONS, commenting: The effect of OMB-mandated staffing reductions on OCCA's compliance review function is illustrative of the impact of these staffing reductions throughout the agency. As the Commission acknowledges in response to another question from the Subcommittee, OMB's imposed reductions were not the result of any analysis of the ICC's responsibilities as compared to its requested staffing resources. Rather, OMB dictated across-the-board personnel cuts of approximately 9 percent in almost every bureau and office. OMB's unrealistic staffing levels will adversely affect the Commission's ability to perform crucial functions throughout the agency.

SENATOR LAUTENBERG: In the Office of Compliance and Consumer Assistance, the level of travel requested for 1991, while well above the level utilized in 1990, is still below the level utilized in 1989. What travel activities by what personnel in this office do you anticipate in 1991 that will not take place in 1990?

ANSWER: The types of travel activities by OCCA's staff will not differ in FY 1991 from the FY 1990 travel activities. However, we do expect that the staff's travel activity will increase. The reason for the difference between FY 1991 and FY 1990 is that travel funds across the board for all types of travel were sequestered during part of FY 1990. OCCA's Special Agent staff incurs most of the travel expense, with the Office's attorney and management travel expenses being considerably less. Travel costs also are incurred for various training courses that the staff attends.

OFFICE OF THE MANAGING DIRECTOR

SENATOR LAUTENBERG: You are also requesting a doubling of the travel budget for the Office of the Managing Director for 1991, a level that will be four times the level utilized in 1989. What will these additional travel funds be used for? What staff within the Office of the Managing Director will be conducting this additional travel?

ANSWER: Because of funding restraints and the uncertainties of the FY 1990 sequester, travel funds for the Office over the past several years have been utilized primarily for local transportation. With the requested funding, Personnel Office staff will be able to visit regional and field offices to evaluate the effectiveness of personnel programs and provide updated guidance to the offices. The Section of Systems Development will examine and review the operation of the computer equipment installed in the offices in the past two years and propose any changes or enhancements.

SENATOR LAUTENBERG: I see that the workload summary for the Office of the Managing Director shows no changes from 1990 to 1991. Do you really anticipate no changes in emphasis in this office whatsoever between these two fiscal years?

ANSWER: The Managing Director's Office is the support component to the Commission's Bureaus and Offices. With the agency having functioned in a status quo mode for the past several years, the demands upon the Office by the operating Bureaus and Offices in these quantifiable workload areas have also remained static.

OFFICE OF COMPLIANCE AND CONSUMER ASSISTANCE - TRAVEL

SENATOR LAUTENBERG: As part of your budget request for travel and transportation of persons, you cite the need to return to a normal level of travel activity by OCCA field staff following reduced travel levels necessitated by the FY 1990 Gramm-Rudman-Hollings sequester. What portion of the FY 1990 G-R-H sequester was achieved through reductions in travel? Please provide the relevant figures and compare them to the increased amount you are requesting for travel in your budget for FY 1991.

ANSWER: As a precautionary measure during the first five months of FY 1990, approximately 18 percent of OCCA's average monthly travel funds were sequestered. OCCA was initially budgeted $625,000 for travel in FY 1990. However, OCCA's total FY 1990 travel expenses were authorized at $406,000 as reported in the FY 1991 budget submission. This travel resource level would have severely hampered the Office's compliance and enforcement program. Since a greater FY 1990 staff-year attrition was allowed to occur during the first part of the fiscal year, additional funds were available to partially restore the Office's travel budget. The five-month sequester resulted in an approximate saving of $113,300.

Since the Commission's budget for FY 1991 does not envision a sequester of travel funds, OCCA will have travel activity at the normal average monthly level which accounts for the increased cost over FY 1990 expenditures. However, it is still less than the original FY 1990 travel allocation of $625,000 because of the reduced number of resources proposed for FY 1991.

RENTAL PAYMENTS

SENATOR LAUTENBERG: As part of your request for rental payments to the General Services Administration, you are citing a decreased cost of $11,000. Do you expect a reduction in space requirements in 1991?

ANSWER: The FY 1991 budget request projects the release of slightly more than 9,000 square feet associated with the reduction of 56 staff-years. This consists of almost 2,000 feet in the field and a little over 7,000 feet at headquarters. The cost of this space reduction offsets the GSA rental rate increase proposed for FY 1991.

SENATOR LAUTENBERG: What are the current square foot requirements of the agency, and what do you anticipate being the amount of space you will use in FY 1991?

ANSWER: The Commission currently has 117,810 square feet at headquarters and 36,767 square feet in the field. The 1991 budget projects the space usage as 110,465 square feet for headquarters and 35,034 square feet in the field based on the staff-year level contained in the budget submission.

SENATOR LAUTENBERG: The GSA-proposed rent increase for 1991 appears to be 4.5 percent. Please provide the rate increases for the preceding four years imposed by GSA.

ANSWER: The following table shows the rates and percent of increase for both headquarters and the field. The rates for the field are averages.

	HEADQUARTERS		FIELD	
FISCAL YEAR	RATE PER SQUARE FOOT	PERCENT OF CHANGE	RATE PER SQUARE FOOT	PERCENT OF CHANGE
1987	$ 21.04	3.4	$ 13.56	-3.1
1988	21.04	0.0	13.56	0.0
1989	21.46	2.0	14.15	4.4
1990	25.55	19.1	16.33	15.4
1991	26.80	4.9	17.29	5.9

PRINTING AND REPRODUCTION

SENATOR LAUTENBERG: In the area of printing and reproduction, please provide figures detailing what portion of your printing budget is executed through the Government Printing Office versus private contractors.

ANSWER: In FY 1989, $377,000 was obligated for printing and reproduction; this included $127,000 for Federal Register publication costs and $250,000 for general use printing. Approximately 51 percent of the general use printing funds were paid to the Government Printing Office (GPO) for preparation of specialized jobs such as the bound volumes of the ICC Reports, annual report to Congress, etc. Approximately 49 percent of the funds were paid to private contractors either through GPO or directly. The FY 1990 funds may see a decrease in the percentage for private contractors. We had experienced service problems with one of our direct GPO-designated contractors which had a fire and subsequently went out of business. It required some time for GPO to locate another contractor for the Commission to use.

SUNSET PROPOSAL

SENATOR LAUTENBERG: In Chairman Gradison's statement to the Committee accompanying the FY 1990 budget request, she outlined the dollar requirements and staff-year requirements to be transferred to the Department of Transportation, the Department of Justice, and the Federal Trade Commission under the legislative proposal to terminate the ICC. Please provide the relevant dollar and staffing requirements for these three and any other agencies under the legislative proposal for FY 1991.

ANSWER: The resource numbers underlying this legislative proposal are as follows:

$16.075 million and 224 staff-years transfer to DOT
$ 1.394 million and 18 staff-years transfer to Justice
$ 1.547 million and 25 staff-years transfer to FTC

The total resources to be transferred are $19.016 million and 267 staff-years. (These are close to the resources now devoted to rail matters at the Commission.) In addition, $15.364 million is requested to cover severance costs of Commission employees who would not be transferred to other agencies.

COMMISSIONER SIMMONS, commenting: Sunset of the Interstate Commerce Commission is a question which will, and should, be decided through the legislative process. Unfortunately, a reduction in Commission resources has been pursued in some quarters as a means to fiscal sunset of the agency. The staffing reductions imposed by OMB on the ICC's original budget request for FY 1991 should be viewed in this light.

SENATOR LAUTENBERG: When was the legislation to sunset the ICC transmitted to Congress for FY 1991?

ANSWER: The Administration transmitted draft legislation to Congress in the 1st session of this Congress (May 31, 1989). This legislation has not been formally introduced, but a similar measure, H.R. 2211, was introduced by Congressman Joel Hefley on May 3, 1989.

SENATOR LAUTENBERG: What action has been taken by the relevant Committees to date?

ANSWER: There have been no hearings held on the measure, and, to date, none have been scheduled.

OFFICE OF THE GENERAL COUNSEL

SENATOR LAUTENBERG: In last year's statement to accompany the budget for FY 1990, Commissioner Simmons noted that the staffing reductions in the General Counsel's Office are partly justified by a major decrease or elimination of litigation involving rail labor issues related to shortline sales. Did this decrease actually take place during 1990? Please provide the relevant data.

ANSWER: The amount of litigation involving rail labor issues has actually intensified. During the first half of FY 1990, this Office rendered 75 rail finance opinions and handled 115 rail finance litigation items. If the trend continues for the remainder of the year, which we believe it will, actual opinions and litigation of issues arising in merger, abandonment, and shortline sales will exceed projected levels for this year. We recently have observed a decline in the number of new rail finance cases being filed which we attribute to the industry's waiting to see how the Supreme Court rules in the pending rail labor cases. Nos. 89-1027 and 89-1028, Norfolk and Western Railway Company v. American Train Dispatchers (Carmen), and how the Commission rules in related pending proceedings. This will cause some decline in our FY 1991 litigation workload. However, we project that this will be offset by an increased opinion workload after the industry digests the Carmen and related decisions and files new and complex rail abandonments and shortline sale applications, and that our rail finance litigation workload will rise after such cases work their way through the Commission to the Courts.

NEGOTIATED RATE CASES

SENATOR LAUTENBERG: In his statement to accompany the FY 1990 budget, Commissioner Simmons noted that the number of cases filed in the Office of Proceedings regarding negotiated rate cases should increase substantially over the course of 1990. Did this increase in the number of filed rate cases take place? Please provide the relevant data.

ANSWER: This increase did not occur. In FY 1989, 189 negotiated rate cases were filed. During the first 6 months of FY 1990, 79 such cases have been filed. In addition, the number of case filings of this type has tapered off as shippers and carriers await the Supreme Court's decision. Many of the filed cases have also been held in abeyance at the request of the parties awaiting action by the Supreme Court.

FTE TABLE

SENATOR LAUTENBERG: Please update the table provided on page 1039 of the committee's hearing record for FY 1990.

ANSWER: The updated table follows:

FY	FTE REQUESTED	FTE AUTHORIZED	FTE EMPLOYED (AVERAGE)	FTE EMPLOYED (Close of FY)	SPECIAL APPTS
1985	987	949	916	834 (9/28/85)	25
1986	923	889/851*	806	702 (9/27/86)	40
1987	800	790	732	706 (9/26/87)	32
1988	748	750	712	678 (9/24/88)	33
1989	724	724/708**	699	675 (9/23/89)	26
1990	712	701		644 (6/11/90)	24

(*889 reduced to 851 under Gramm-Rudman-Hollings)
(**708 reflects a reprogramming figure)

SPECIAL APPOINTMENTS

SENATOR LAUTENBERG: What are special appointments positions used for in the ICC? What is the average salary level for these special appointments, and in what offices are they located?

ANSWER: A special appointment position is any position other than full-time permanent. As of June 11, 1990, there were 24 special appointment positions at the Commission located in the following offices:

Commissioners and Their Offices	5 temporary
Office of the Secretary	1 part-time
Office of the General Counsel	1 part-time
Office of Proceedings	3 part-time
Office of Public Assistance	2 part-time
Bureau of Accounts	1 expert
Office of the Compliance and Consumer Assistance	6 temporary
	2 part-time
	1 Veterans' Readjustment Act
Office of the Managing Director	1 part-time
	1 temporary

The salary levels of these employees range from part-time or temporary appointment clerical staff at the Grade 5-6 level to attorneys at the Grade 14-15 level who prefer to work part-time.

SENATOR LAUTENBERG: On page 1040 of last year's hearing record, Commissioner Lamboley cited a letter of the Deputy Associate Director of OMB noting that, as part of the budget process that gave rise to the FY 1990 budget request, "OMB eliminated only positions that would have remained vacant." Is this also true for the positions that are being eliminated as part of the FY 1991 budget request?

ANSWER: OMB reduced the Commission's FY 1991 budget request to reflect the impact of the original FY 1990 Gramm-Rudman-Hollings sequester and required program absorption of one-half of the January 1991 general schedule and executive level pay raises. It provides adequate funding for the requested 645 staff-years. Staff-years in excess of the requested level cannot be funded, and the Commission's staffing level will have to be reduced to attain this FY 1991 staff-year ceiling.

SUNSET PROPOSAL

SENATOR LAUTENBERG: How, if at all, does the Administration's legislative proposal to sunset the ICC differ from the legislation proposed in previous years?

ANSWER: H.R. 2211, the legislative proposal submitted by Congressman Hefley, is almost identical to the Administration's proposal transmitted to Congress on May 31, 1989. The primary difference between the two is the sunset date: October 1, 1991 in H.R. 2211, vs. October 1, 1990 (or six months after enactment for a few sections) in the Administration's proposal. Both proposals are substantively the same as those introduced in previous years, though there are some minor technical differences.

ORAL ARGUMENTS AND CONFERENCES

SENATOR LAUTENBERG: Please update the table provided on page 1044 of the Committee's hearing record regarding the frequency of oral arguments and conferences, both open and closed, by the Commission.

ANSWER: The updated table follows:

SCHEDULE OF ORAL ARGUMENTS AND CONFERENCES

	Oral Arguments	Conferences	
		Open	Closed
FY 1988	5	5	0
FY 1989	4	6	0
FY 1990**	3	15*	2
TOTAL	12	26	2

*Includes 10/17/89 Conference (Demonstration of Electronic Filing of Tariffs).

**Through June 19, 1990.

DELAWARE AND HUDSON RAILROAD

SENATOR LAUTENBERG: Please summarize for the record all decisions reached by the Commission regarding the Delaware and Hudson Railway Company over the course of the past year.

ANSWER: On June 20, 1988, the Delaware and Hudson Railway Company (D&H) filed a petition for reorganization under Chapter 11 of the Bankruptcy Code, 11 U.S.C. 1161, et. seq., in the U.S. District Court for the District of Delaware (Bankruptcy Filing No. 88-342). Upon notification from D&H that it was terminating operations on June 23, 1988, by orders served June 22 and June 23, 1988, pursuant to the provisions of 49 U.S.C. 11125 (Directed Service Order No. 1504), the Commission found that D&H's impending cessation of service without authority met the statutory criteria for directed service and authorized the New York, Susquehanna and Western Railway Company (NYSW) to operate the entire 569 miles of D&H-owned lines and 1,012 miles of D&H trackage rights. The orders specified that there would be no Federal subsidy or compensation under 49 U.S.C. 11125(b)(5). This authority expired February 13, 1989.

On February 1, 1989, the Commission issued Service Order No. 1506 under authority of 49 U.S.C. 11123(a). As required by that section, the Commission determined that, the statutory period for directed service having expired, an emergency affecting rail service in a substantial region of the United States continued to exist requiring Commission action. The order was issued for 30 days. On March 14, 1989, after a hearing, Supplemental Order No. 1 was issued which extended Service Order No. 1506 until March 16, 1990.

On February 14, 1989, I.C.C. Order No. 7 was issued to permit the rerouting of overhead traffic that might be affected by operational limitations of the interim operators.

Service Order No. 1506 was further modified in Supplemental Order Nos. 2 (February 15, 1990) and 3 (February 23, 1990) to reflect changes or limitations in the operations of the NYSW, and to include authority for additional operations by Lackawanna Valley Railroad and North Shore Railroad in Pennsylvania.

On February 25, 1990, the D&H Trustee notified the Commission that he would resume full operations of the D&H system at 11:59 p.m., February 27, 1990.

Upon determination by the Commission that full resumption of service by the Trustee had occurred, the Commission vacated Service Order No. 1506 and I.C.C. Order No. 7 effective March 1, 1990. The Trustee's operations of the D&H, initiated February 28, 1990, are continuing.

On June 7, 1990, the Bankruptcy Court approved the Trustee's recommendation that the D&H be sold to CP Rail (Canadian Pacific Limited), and on June 8, 1990, CP Rail filed its notice of intent to file applications to acquire D&H railroad property and trackage rights (Finance Docket No. 31700). CP Rail's application to acquire D&H is expected to be filed on or about July 16, 1990, and the Court has requested the Commission to complete its review within 90 days, or by October 15, 1990.

It is expected that the Commission will make every effort to meet the Court's requested schedule. It is presently uncertain, however, whether the Court will allow the Trustee to continue his operations of the D&H during the pendency of acquisition proceeding, or whether CP Rail will ask the Commission for emergency authority to operate D&H if the Court orders the Trustee to cease his operations.

COMMISSIONERS AND THEIR OFFICES

SENATOR LAUTENBERG: Please provide an update on the status of the terms of the sitting Commissioners and the expiration of their terms.

ANSWER: The updated information follows:

Commissioners and Expiration of Terms

Paul H. Lamboley, December 31, 1989

J.J. Simmons, III, December 31, 1990

Karen Borlaug Phillips, December 31, 1991

Edward M. Emmett, December 31, 1992

Edward J. Philbin, December 31, 1993

SENATOR LAUTENBERG: Please also update the list of staff with name, grade and position for each Commissioner's office in the same format as done on page 1075 of last year's hearing record.

ANSWER: The following chart provides the name, grade, and position of each staff member currently assigned to each Commissioner's office.

Name	Grade	Position
Office of Chairman Philbin:		
David M. Konschnik	ES-6	Chief of Staff
Craig M. Keats[1]	GM-15	Attorney Advisor
Howard K. Face[2]	ED	Expert
Carol A. Barling	GS-12	Confidential Assistant
Mildred B. Toman	GS-9	Secretary
Audrey P. Charlson[2]	GS-3	Clerk Typist
Office of Vice Chairman Phillips:		
Debra A. Weiner	GM-15	Attorney Advisor
Paul R. Joyce[1]	GM-15	Attorney Advisor
Samuel E. Eastman	GM-15	Attorney Advisor
Janie A. McCutchen	GS-12	Staff Advisor
Marie C. Anderson	GS-8	Secretary
Office of Commissioner Lamboley:		
Dixie E. Horton	GM-15	Attorney Advisor
Theodore K. Kalick	GM-15	Attorney Advisor
Lucy A. Aloi	GS-11	Confidential Assistant
Lorelei W. Ransome	GS-8	Secretary
Office of Commissioner Simmons:		
Van A. Bosco	GM-15	Attorney Advisor
Rickey L. Crawford	GM-15	Attorney Advisor
Thomas T. Vining	GM-15	Attorney Advisor
Hazel M. Lowe	GS-11	Confidential Assistant
Rebecca W. Powell	GS-8	Secretary
Office of Commissioner Emmett:		
William A. Mullins	GM-15	Attorney Advisor
Robert A. Voltmann	GM-15	Staff Advisor
Juan C. Cunningham	GM-15	Attorney Advisor
Kay L. Killen	GS-11	Confidential Assistant
Lenore M. Cummings	GS-8	Secretary

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[1] Employee detailed from another office.

[2] Employee on temporary appointment.

BUREAU AND OFFICE STAFFING

SENATOR LAUTENBERG: Since no reprogramming has yet been approved for FY 1990, please provide the table in the format as found on page 1083 of last year's hearing record regarding each bureau or office, the dollars available, and staff level, and current onboard strength of the Commission.

ANSWER: The following table provides the name of the Bureau or Office, the funds and staff authorized in the FY 1990 budget, and the on-board strength as of June 11, 1990.

FY 1990

BUREAU/OFFICE	APPROPRIATED ($000)	STAFF	CURRENT ON-BOARD STRENGTH*
Commissioners and their Offices	$3,676	46	44
Secretary	3,385	82	84
General Counsel	1,857	25	23
Proceedings	7,592	111	102
Hearings	409	5	5
Public Assistance	1,102	14	13
Transportation Analysis	2,303	27	25
Accounts	4,431	61	55
Traffic	3,017	59	55
Compliance and Consumer Assistance	11,992	197	193
Managing Director	4,441	74	69
	$44,205	701	668

*As of June 11, 1990

SENATOR LAUTENBERG: Has there been any change, or is any change anticipated in the number of staff-years and the location of staff at each of the field offices in the Commission? If the table on page 1085 of last year's hearing record is no longer accurate, please provide a new table.

ANSWER: There have been no major changes in OCCA's full-time and other-than-full time staff at the Commission's 22 field locations. The approximate number of staff-years projected at each Office for FY 1990 follows:

Eastern Region	Staff-Years
Philadelphia, PA (Regional Office)	28
Boston, MA	10
New York, NY	6
Cleveland, OH	5
Baltimore, MD	4
Charlotte, NC	2
Atlanta, GA	13
Jacksonville, FL	3
Central Region	
Chicago, IL (Regional Office)	28
Minneapolis, MN	2
Indianapolis, IN	2
Omaha, NE	1
Kansas City, MO	2
St. Louis, MO	3
Ft. Worth, TX	11
New Orleans, LA	1
Western Region	
San Francisco,CA (Regional Office)	15
Los Angeles, CA	8
Phoenix, AZ	1
Denver, CO	5
Salt Lake City, UT	1
Seattle, WA	3

APPROPRIATIONS V. OBLIGATIONS

SENATOR LAUTENBERG: Please provide an updated table for FY 1989 and your anticipated level of appropriations versus obligations for FY 1990 as found on page 1086 of last year's hearing record.

ANSWER: The comparisons for Fiscal Years 1987, 1988, 1989, and projected 1990 are as follows:

	Fiscal Year			
	1987	1988	1989	1990
Appropriation ($000)	46,855	44,294	43,115	44,205
Obligations ($000)	42,835	43,849	42,973	44,000

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[1] Includes transfers to ICC Salaries and Expenses from Payments for Directed Rail Service: FY 1987 - $53,000.

[2] Projected.

OWNER/OPERATOR COMPLAINTS

SENATOR LAUTENBERG: Please provide updated data regarding the recoveries per complaint filed by owner/operators in 1988, 1989, and your anticipated level for 1990 as discussed on page 1087 of last year's hearing record.

ANSWER: Approximately 1,100 complaints were received from owner-operators in FY 1988, 800 in FY 1989, and 900 are expected in FY 1990. The Commission's staff assisted owner-operators in recovering from motor carriers approximately $455,100 in FY 1988, $325,000 in FY 1989, and $215,000 in FY 1990. The average recovery per complaint for FY 1990 is $238. However, it would be a mistake to evaluate this function on that basis. Complaints from owner-operators involve matters other than the recovery of money, and not all complaints are resolved in favor of the owner-operators. Complaints frequently involve contractual issues between the parties regarding a wide range of bilateral responsibilities of the owner-operators and the motor carriers in providing line-haul transportation and attendant arrangements. The value of the Commission's procedures in this area is the staff's impartiality in analyzing the facts and circumstances involved in the complaints and working with the parties in reaching an informal resolution of the dispute, when possible.

RULEMAKINGS

SENATOR LAUTENBERG: Please update the list of rulemakings that are currently before the Commission as shown on pages 1088, 1089, and 1090 of last year's hearing record.

ANSWER: As of June 1, 1990, rulemakings had been instituted and are pending, or requests for rulemaking have been filed and docketed (but not yet instituted) in the following cases:

Ex Parte MC-19 (Sub-No. 41)	Practices of Motor Common Carriers of Household Goods (Limitations of Liability), 6 I.C.C.2d 666 (1989), Petition for Reconsideration, filed May 5, 1989, by the Household Goods Carriers' Bureau, Inc.

Ex Parte MC-37 (Sub-No. 40)	Commercial Zones and Terminal Areas (Proposal to Explore Expansion of Commercial Zones and Terminal Areas)
Ex Parte MC-41 (Sub-No. 1)	Identification of Motor Vehicles, Notice of Proposed Rulemaking, 54 Fed. Reg. 49104 (November 28, 1989)
Ex Parte 55 (Sub-No. 22A)	Implementation of Environmental Law
Ex Parte MC-180 (Sub-No. 1)	Discount Payments to Motor Carriers of Property
Ex Parte MC-194	Limitation of Smoking on Interstate Passenger Carrier Vehicles
Ex Parte MC-195	Establishment of Minimum Rate Standard and Other Relief
Ex Parte 274 (Sub-No. 13A)	Rail Abandonments-National Trails System Improvements Act
Ex Parte 290 (Sub-No. 2)	Railroad Cost Recovery Procedures (Petition to modify fuel component)
Ex Parte 290 (Sub-No. 2)	Railroad Cost Recovery Procedures (Modification of materials and supplies component)
Ex Parte 290 (Sub-No. 4)	Railroad Cost Recovery Procedures - Productivity Adjustment
Ex Parte 290 (Sub-No. 7)	Productivity Adjustment - Implementation
Ex Parte 328 (Sub-No. 1)	Association of American Railroads - Petition for Declaratory Order - Clarification of Tank Car Allowance and Implementing Tariff
Ex Parte 334 (Sub-No. 6)	Review of Car Hire Regulation
Ex Parte 346 (Sub-No. 14A)	Rail General Exemption Authority--Miscellaneous Agricultural Commodities--Petition to Revoke Conrail Exemption
Ex Parte 346 (Sub-No. 19B)	Boxcar Car Hire and Car Service--Petition for Exemption--Bangor and Aroostook Railroad Company
Ex Parte 346 (Sub-No. 23)	Railroad Exemptions--Filing Quotations under Section 10721
Ex Parte 346 (Sub-No. 24)	Rail General Exemption Authority--Miscellaneous Manufactured Commodities
Ex Parte 346 (Sub-No. 25)	Rail General Exemption Authority--Lumber, Plywood, and Particle Board

Ex Parte 346 (Sub-No. 26)	Petition of American Association of Railroads to Exempt Rail Industrial Development Activities from the Elkins Act
Ex Parte 347 (Sub-No. 2)	Rate Guidelines - Non-Coal Proceedings
Ex Parte 392 (Sub-No. 1A)	Class Exemption for Acquisition and Operations of Rail Lines
Ex Parte 392 (Sub-No. 2)	Class Exemption for the Construction of Connecting Tracks 49 U.S.C. 10901
Ex Parte 392 (Sub-No. 3)	Class Exemption for Rail Construction
Ex Parte 394 (Sub-No. 3)	Cost Ratios For Recyclables - Compliance Procedures
Ex Parte 394 (Sub-No. 6)	Cost Ratio for Recyclables - 1989 Determination
Ex Parte 395 (Sub-No. 2)	Revision Feeder Railroad Development Rules
Ex Parte 431 (Sub-No. 2)	Review of the General Purpose Costing System
Ex Parte 444	Electronic Filing of Tariffs
Ex Parte 468	Review of Railroad Depreciation Studies by Independent Accountants
Ex Parte 483	Railroad Revenue Adequacy - 1988 Determination
Ex Parte 486	Railroad Cost of Capital - 1989

In addition, the Commission has docketed Ex Parte MC-196, Investigation of Motor Carrier Collective Ratemaking and Related Procedures and Practices, on its own motion, and will shortly issue a notice instituting this investigation and factfinding proceeding.

REORGANIZATION

SENATOR LAUTENBERG: Is the Commission considering, or is it likely to consider, a reorganization of Bureaus and/or Offices in the near future? What will the reorganization consist of?

ANSWER: The Commission is currently considering a reorganization of Bureaus and/or Offices, with a resulting reallocation of resources. At this point, reorganization plans have not been finalized.

SENATOR LAUTENBERG: Are there any funding requirements associated with this reorganization? Will there be a reprogramming request to implement this reorganization in FY 1990?

ANSWER: The Commission will not require any additional funding requirements associated with the proposed reorganization. The Commission anticipates submitting a FY 1990 reprogramming request which addresses the resource needs of the proposed reorganization after the Commission's July Budget Conference.

SENATOR LAUTENBERG: Will the Commission be revising its budget request for FY 1991 to correspond with a reorganized ICC?

ANSWER: The Commission anticipates revising its FY 1991 budget to reflect the impact of reorganization plans now being developed. This FY 1991 revision will be contained in the Commission's FY 1992 budget estimates which will be transmitted concurrently to OMB and the Congress.

PANAMA CANAL COMMISSION

STATEMENT OF FERNANDO MANFREDO, ACTING ADMINISTRATOR

INTRODUCTION

MR. CHAIRMAN, MEMBERS OF THE SUBCOMMITTEE, I AM FERNANDO MANFREDO, ACTING ADMINISTRATOR OF THE PANAMA CANAL COMMISSION. I AM PLEASED TO SUBMIT THIS STATEMENT FOR THE RECORD WHICH PRESENTS THE BUDGET PROGRAMS FOR FISCAL YEAR 1991 OF THE PANAMA CANAL COMMISSION, THE AGENCY RESPONSIBLE FOR THE OPERATION OF THE PANAMA CANAL.

MILESTONE

I AM PROUD TO BE THE FIRST PANAMANIAN NATIONAL TO OCCUPY THE OFFICE OF ADMINISTRATOR OF THE PANAMA CANAL COMMISSION, A U.S. GOVERNMENT AGENCY, EVEN THOUGH IN AN ACTING CAPACITY.

OVERVIEW FISCAL YEAR 1989

FISCAL YEAR 1989 PRESENTED ONE OF THE MOST SERIOUS FINANCIAL CHALLENGES FACED BY THE COMMISSION SINCE THE LOSS OF ALASKAN NORTH SLOPE OIL TRAFFIC IN FISCAL YEAR 1983. FISCAL YEAR 1989 REVENUES WERE UNDER THE BUDGET BY ALMOST $29 MILLION, WITH ANNUAL TOLLS FALLING SHORT OF TARGET BY $15 MILLION. THE DECLINE IN TOLLS WAS ATTRIBUTABLE PRIMARILY TO REDUCED TRANSITS AMONG GRAIN, PETROLEUM, AND AUTOMOBILE CARRIERS. GRAIN SHIPMENTS FOR THE YEAR WERE DOWN 19.4 PERCENT FROM 1988 LEVELS; PETROLEUM PRODUCTS TRADE WAS OFF 12.8 PERCENT, AND AUTOMOBILE SHIPMENTS FELL 6.7 PERCENT. THERE WERE SOME INCREASES IN OTHER COMMODITIES; HOWEVER, THESE INCREASES WERE NOT SUFFICIENT TO OFFSET THE AFOREMENTIONED DECLINE IN KEY TRADES. THE REMAINING REVENUE FALL-OFF WAS DUE PRINCIPALLY TO REDUCTIONS IN TRANSIT-RELATED SERVICES WHICH ARE DIRECTLY RELATED TO VESSEL TRAFFIC VOLUME.

IN RESPONSE TO THE DECLINING RESOURCES, THE COMMISSION INSTITUTED DURING THE YEAR A SERIES OF COST-SAVING MEASURES DESIGNED

TO BRING COSTS IN LINE WITH LOWER PROJECTED REVENUES AND THEREBY MITIGATE THE SIZE OF THE POTENTIAL FISCAL YEAR LOSS. THE ACTIONS TAKEN INCLUDED: THE INSTITUTION OF A HIRING FREEZE; THE APPLICATION OF A REDUCTION IN PERMANENT EMPLOYMENTS (WHICH WAS ACHIEVED THROUGH ATTRITION); THE RESTRUCTURING OF CERTAIN COMMISSION FUNCTIONS; AND THE DEFERRAL OF CERTAIN NON-CRITICAL MAINTENANCE PROJECTS THAT DID NOT IMPACT ON THE SAFE AND EFFICIENT TRANSIT OF VESSELS.

AS A RESULT OF TAKING THESE COST-SAVING MEASURES EARLY IN THE FISCAL YEAR, THE COMMISSION WAS ABLE TO REDUCE EXPENSES, THUS HOLDING THE YEAR'S OPERATING LOSS TO $7.7 MILLION. AS YOU MAY BE AWARE, UNDER THE PANAMA CANAL ACT OF 1979, ANY LOSSES INCURRED ARE CARRIED FORWARD FOR RECOVERY FROM FUTURE PERIODS REVENUES. THIS BROUGHT THE CUMULATIVE LOSS AT THE CLOSE OF FISCAL YEAR 1989, INCLUDING THE LOSSES FROM THE PREVIOUS TWO YEARS, TO $10 MILLION. IT IS ANTICIPATED THAT THESE LOSSES WILL BE FULLY RECOVERED IN FUTURE YEARS AS REQUIRED BY THE PANAMA CANAL ACT OF 1979.

WITH RESPECT TO THE 1989 LOSS, I WOULD LIKE TO POINT OUT THAT THE COMMISSION INCURRED SOME SIGNIFICANT UNBUDGETED COSTS DURING THE YEAR DUE TO THE POLITICAL CRISIS IN THE REPUBLIC OF PANAMA. FOR EXAMPLE, THE COMMISSION WAS FORCED TO CONTRACT FOR SHUTTLE BUS SERVICES AND PROVIDE TRANSPORTATION ALLOWANCES TO PANAMANIAN EMPLOYEES TO ENABLE THEM TO TRAVEL BETWEEN THEIR HOMES AND WORKSITES SINCE THEY WERE UNABLE TO OBTAIN LICENSE PLATES FOR THEIR PRIVATELY OWNED VEHICLES. TOTAL POLITICAL COSTS AMOUNTED TO APPROXIMATELY $4.6 MILLION FOR THE YEAR. EXCEPT FOR SUCH COSTS, THE COMMISSION'S OPERATING LOSS FOR THE YEAR WOULD HAVE BEEN ESSENTIALLY ON TARGET WITH BUDGET.

OUTLOOK FOR FISCAL YEAR 1990

TURNING TO FISCAL YEAR 1990, THE COMMISSION'S TRAFFIC AND TOLLS PROJECTIONS REFLECT ESSENTIALLY NO GROWTH OVER THE 1989 LEVELS.

HOWEVER, AS MR. PAGE STATED, A 9.8 PERCENT TOLL-RATE INCREASE BECAME EFFECTIVE OCTOBER 1, 1989, AND IS EXPECTED TO GENERATE SOME $32 MILLION ANNUALLY. WITH THE TOLL INCREASE, THE COMMISSION IS CURRENTLY PROJECTING FISCAL YEAR 1990 TOLLS TO BE $360.1 MILLION, AS COMPARED TO LAST YEAR'S INITIAL ESTIMATE OF $374.3 MILLION. AS A RESULT OF THE ACROSS-THE-BOARD COST-SAVING MEASURES TAKEN IN FISCAL YEAR 1989, WHICH ALSO HAVE BEEN CARRIED FORWARD INTO FISCAL YEAR 1990, COMMISSION EXPENSES ARE EXPECTED TO BE CORRESPONDINGLY LOWER AND IN LINE WITH THE LOWER TOLLS BEING PROJECTED.

COMMISSION OPERATIONS IN FISCAL YEAR 1990 ANTICIPATE THE RECOVERY OF ALL OPERATING AND CAPITAL COSTS FOR THAT YEAR, PLUS A $6.2 MILLION CONTRIBUTION TOWARDS THE CUMULATIVE LOSSES CARRIED FORWARD FROM PREVIOUS YEARS.

AS A FINAL NOTE ON FISCAL YEAR 1990, I WOULD LIKE TO MENTION THAT THE PANAMA CANAL COMMISSION HAS CONTINUED TO INCUR A VARIETY OF UNBUDGETED EXTRAORDINARY COSTS WHICH ARE THE RESULT OF THE ACTIONS AND POLITICAL DECISIONS OF THE NORIEGA REGIME IN PANAMA OVER THE PAST TWO YEARS. AS A CONSEQUENCE, THE COMMISSION WAS FACED WITH A DIFFICULT TASK IN TRYING TO ACCOMMODATE THESE COSTS. IT COULD HAVE ABSORBED THESE COSTS THROUGH FURTHER DEFERRAL OF ESTABLISHED MAINTENANCE PROGRAMS OR BY REDUCTION IN FORCE LEVELS. EITHER OPTION, HOWEVER, WOULD HAVE RESULTED IN AN UNDESIRED DETERIORATION IN THE QUALITY OF CANAL SERVICES FURNISHED TO INTERNATIONAL SHIPPING. ACCORDINGLY, IN ORDER TO SUSTAIN QUALITY TRANSIT SERVICE, THE COMMISSION'S BOARD OF DIRECTORS REACHED THE DECISION THAT THE BEST OPTION FOR THE CANAL AND ITS CUSTOMERS WOULD BE TO RECOVER THESE EXTRAORDINARY COSTS THROUGH THE APPLICATION OF A TEMPORARY 20 PERCENT SURCHARGE ON ANCILLARY MARINE SERVICES. THE SURCHARGE WAS APPLIED TO ALL TARIFF RATES FOR TUG AND LINEHANDLING SERVICES, EFFECTIVE APRIL 1, 1990, AND MAY CONTINUE FOR THE REMAINDER OF THE CALENDAR YEAR.

FISCAL YEAR 1991 OPERATIONS

FOR FISCAL YEAR 1991, WE ARE ESTIMATING A MODEST INCREASE IN CANAL TOLLS REVENUE OF APPROXIMATELY $6 MILLION OR 1.8 PERCENT OVER 1990. AGAIN, THE COMMISSION IS PLANNING TO FULLY COVER ITS OPERATING AND CAPITAL COSTS FOR THE YEAR, AS WELL AS RECOVER THE REMAINING PORTION OF THE CUMULATIVE LOSSES FROM PRIOR PERIODS. BECAUSE OF THE FLAT TOLLS OUTLOOK FOR 1991, WE ARE NOT PROJECTING ANY GROWTH IN COMMISSION OPERATING EXPENSES OTHER THAN THAT CAUSED BY INFLATION. ONE NOTE OF CAUTION: ALTHOUGH WE PROJECT A BREAK-EVEN BUDGET AND A CONTRIBUTION TO PRIOR YEARS' LOSSES, COSTS HAVE BEEN CONSTRAINED TO THE POINT THAT ANY SUBSTANTIAL UNDERPERFORMANCE WITH RESPECT TO TRAFFIC COULD AGAIN PLACE A GREAT DEAL OF PRESSURE ON THE CANAL ENTERPRISE TO MEET ITS FINANCIAL OBJECTIVES FOR THE YEAR.

CONGRESSIONAL LIMITATIONS

FOR THOSE ITEMS UNDER CONGRESSIONAL LIMITATIONS, THE COMMISSION IS REQUESTING A TOTAL OF $52,000 FOR OFFICIAL RECEPTION AND REPRESENTATION EXPENSES, OF WHICH (1) NOT MORE THAN $12,000 MAY BE AVAILABLE TO THE SUPERVISORY BOARD OF THE COMMISSION, (2) NOT MORE THAN $6,000 MAY BE AVAILABLE FOR SUCH EXPENSES OF THE SECRETARY OF THE COMMISSION, AND (3) NOT MORE THAN $34,000 MAY BE AVAILABLE TO THE ADMINISTRATOR OF THE COMMISSION.

WITH RESPECT TO ADMINISTRATIVE EXPENSES, THE REVOLVING FUND LEGISLATION LIMITS SUCH EXPENSES TO THE AMOUNT PROVIDED ANNUALLY IN APPROPRIATION ACTS. AS PROVIDED IN THE PRESIDENT'S BUDGET FOR FISCAL YEAR 1991, THE COMMISSION PROJECTS A REQUIREMENT OF $48.9 MILLION FOR THIS CATEGORY OF EXPENSE. THE ESTIMATE IN FISCAL YEAR 1991 IS ACTUALLY MODESTLY BELOW THE LIMITATION SET FOR FISCAL YEAR 1990. I WOULD LIKE TO ADDRESS IN MORE DETAIL THE FUNCTIONS THAT ARE INCLUDED IN THIS CATEGORY.

1. EXECUTIVE DIRECTION, $11.2 MILLION. THIS PROVIDES FOR THE MANAGEMENT, PLANNING, DIRECTION, AND CONTROL OF OVERALL COMMISSION ACTIVITIES, SUCH AS THE OFFICE OF THE ADMINISTRATOR, OTHER ADMINISTRATIVE SERVICES, AND ALSO THE COSTS ASSOCIATED WITH THE SECRETARY'S OFFICE IN WASHINGTON, D.C.

2. OPERATIONS DIRECTION, $2.2 MILLION. THIS PROVIDES FOR THE BUREAU-LEVEL DIRECTION AND COORDINATION OF SEPARATE OPERATING BUREAUS WHICH ARE DIRECTLY RELATED TO THE TRANSIT AND SUPPORT FUNCTIONS OF THE COMMISSION.

3. FINANCIAL MANAGEMENT, $13.9 MILLION. THIS FUNCTION IS RESPONSIBLE FOR THE DEVELOPMENT OF FINANCIAL, ACCOUNTING AND RATE-MAKING POLICIES, ESTABLISHMENT OF SYSTEMS OF INTERNAL CONTROL, AND PROCESSING OF THE COMMISSION'S BIWEEKLY PAYROLL.

4. PERSONNEL ADMINISTRATION, $4.5 MILLION. THIS FUNCTION HAS THE AGENCY-WIDE RESPONSIBILITY FOR PERSONNEL ADMINISTRATION AND MANAGEMENT, AND THE JOINT PERSONNEL PROGRAM THAT PROVIDES STAFFING SERVICES FOR PARTICIPATING FEDERAL AGENCIES IN THE PANAMA CANAL AREA.

5. EMPLOYMENT COSTS, $17.1 MILLION. THIS CATEGORY OF EXPENSE COVERS CERTAIN EMPLOYMENT COSTS OF THE COMMISSION WHICH ARE GENERAL IN NATURE AND NOT IDENTIFIED WITH OTHER SPECIFIC ACTIVITIES. INCLUDED ARE PROVISIONS FOR REIMBURSEMENT TO THE DEPARTMENT OF DEFENSE FOR EDUCATION AND HOSPITAL SERVICES; THE COMMISSION'S SHARE OF PREMIUM COSTS FOR EMPLOYEES' HEALTH BENEFITS INSURANCE; AND EMPLOYEES' HOME LEAVE TRAVEL AND REPATRIATION COSTS.

CAPITAL REQUIREMENTS

TURNING TO THE CAPITAL PROGRAM FOR FISCAL YEAR 1991, WE ARE PROJECTING A REQUIREMENT OF $30 MILLION FOR NEW CAPITAL PROJECTS. AS IN PAST YEARS, THE GREATEST PORTION OF THE PROGRAM IS DEVOTED TO

ESSENTIAL TRANSIT FACILITIES AND EQUIPMENT. MAJOR ITEMS IN THE FISCAL YEAR 1991 PROGRAM INCLUDE REPLACEMENT OF A TUGBOAT, CONTINUED UPGRADING OF THE FIRE PROTECTION SYSTEM AT THE LOCKS, AND REPLACEMENT OF CERTAIN FLOATING EQUIPMENT.

CONCLUSION

IN CONCLUDING MY REMARKS ON THE FISCAL YEAR 1991 BUDGET, I WOULD LIKE TO POINT OUT THAT WHILE THE COMMISSION HAS EXPERIENCED SEVERAL UNUSUAL AND DEMANDING YEARS, RESULTING PRINCIPALLY FROM THE POLITICAL DIFFICULTIES WITHIN THE REPUBLIC OF PANAMA, THE CANAL CONTINUED TO PROVIDE SAFE AND EFFICIENT SERVICE TO ALL CANAL CUSTOMERS. THIS FACT IS DUE PRIMARILY TO THE DEDICATION AND PROFESSIONALISM OF COMMISSION EMPLOYEES, U.S., PANAMANIAN, AND THIRD COUNTRY NATIONALS, MANY OF WHOM HAVE BEEN DIRECTLY IMPACTED UPON BY THESE EVENTS. I JOIN MR. PAGE IN COMMENDING THE COMMISSION WORK FORCE FOR ITS OUTSTANDING PERFORMANCE.

MR. CHAIRMAN, THAT CONCLUDES MY PREPARED REMARKS.

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

STATUS OF SUPERVISORY BOARD

S-1. SENATOR LAUTENBERG. Please provide for the record a complete update on the status of the terms of the members of the Supervisory Board, the timing of future appointments of both American and Panamanian members of the Board, and whether there are any vacancies currently on the Board.

Answer. As stipulated by the 1977 Panama Canal Treaty and the Panama Canal Act of 1979, the Panama Canal Commission is supervised by a Board composed of nine members, five of whom are nationals of the United States appointed by the President by and with the advice and consent of the Senate, and four of whom are Panamanian nationals proposed by the Republic of Panama for appointment by the President. Each member holds office at the pleasure of the President. Should Panama request the United States to remove a Panamanian member from membership on the Board, the United States is to agree to such a request. In the case of removal of a Panamanian Board member at the initiative of the United States, both parties must consult in advance in order to reach agreement concerning the removal, and Panama shall propose another Panamanian for appointment by the President. Inasmuch as no definite time frame is specified for the term of office of Board members, the timing of any future appointments of both American and Panamanian members cannot be anticipated at this time. Currently, there are no vacancies on the Commission's Board of Directors.

S-1A. SENATOR LAUTENBERG. Please also provide information on the attendance and involvement of the Panamanian members of the Board since Operation Just Cause. Are the Panamanian members of the Board now attending and participating fully in Board meetings and participating on a regular basis?

Answer. Since Operation Just Cause, there has been only one meeting of the Board which was held on January 31, 1990. On December 27, 1989, President Endara's government nullified the appointments of the former Panamanian Board members who had represented the Noriega regime, and eventually proposed four new members to the United States. Those nominees attended the January meeting as observers only, pending their formal appointment to the Board by President Bush, which occurred on May 1, 1990. Prior to and since their formal appointments, the Panamanian members have participated actively in meetings of standing committees established by the Board in January. It is expected that the four Panamanian members will also attend and be fully involved in the next Board meeting, scheduled for July 10, 1990, and in all subsequent meetings of the Board and its standing committees.

S-2. SENATOR LAUTENBERG. What are the salaries for the members of the Supervisory Board?

Answer. Members of the Board serve without compensation, but are allowed travel or transportation expenses, including per diem in lieu of subsistence. In addition to such travel and transportation expenses, members of the Board who hold no other office with either government for which they receive pay are compensated at the daily equivalent of the annual rate of basic pay in effect for grade GS-18 for each day during which they are traveling to or from or attending meetings of the Board or, as authorized by the Chairman of the Board, while on official Panama Canal Commission business.

S-3. SENATOR LAUTENBERG. Within the $103,000 in operating expenses requested for "executive direction", how much of that is for official reception and representation costs?

Answer. A modest amount of $12,000 for reception and representation expenses has been included within the total $103,000 for operating expenses of the Supervisory Board.

S-4. SENATOR LAUTENBERG. What percentage of all reception and representation costs are included in the Supervisory Board request on page 24 of the justification?

Answer. Approximately 23 percent of the Commission's total reception and representation costs are included in the Supervisory Board's request.

S-5. SENATOR LAUTENBERG. How do these reception and representation costs compare to the costs for the three previous fiscal years?

Answer. For the fiscal years 1988, 1989 and 1990, the amount authorized for reception and representation for the Commission has been $39,000. There continues to be a high degree of interest from Canal users and other groups in the Canal enterprise, and every effort is made to demonstrate to these individuals that the Canal is a viable operation especially in light of the recent events that have taken place in the Republic of Panama. In fiscal year 1991, the amount requested is $52,000 which more accurately represents the levels needed to meet current requirements.

S-6. SENATOR LAUTENBERG. Please update the table in last year's hearing record regarding cash grants to assist community and recreational organizations within the Canal area.

Answer. The information follows.

	FY 1988	FY 1989	Thru June FY 1990
American Pacific Sportsmen's Assoc.	$ -	$ 1,500	$ -
Atlantic Division Slow-Pitch Softball.	1,000	900	1,000
Balboa Gun Club......................	2,500	-	-
Brazos Brook Club....................	-	1,500	-
Gatun Saddle Club....................	-	2,500	-
Gatun Yacht Club.....................	5,000	6,300	4,750
Industrial Softball League-Pacific....	2,000	-	-
Industrial Division Internal Slow-Pitch	-	750	800
Junior Football League (Balboa Rams)..	5,000	3,200	-
Pacific Girls Softball League.........	300	300	-
Pacific Little League.................	1,350	-	-
Panama Canal Tarpon Club..............	3,000	-	3,000

PCC Employee Running Club.............	1,000	400	-
The Theater Guild, Inc................	-	3,000	-
TOTAL.........................	$21,150	$20,350	$9,550

S-7. SENATOR LAUTENBERG. Where is the office of the Commission Secretary located in Washington, D.C.? What rental costs are paid for how much square footage of office space? What is the square feet per office employee figure for the office of the Commission Secretary?

Answer. The Office of the Secretary of the Panama Canal Commission is located at 2000 L Street, N.W., Room 550, Washington, D.C. 20036-4996. The Fiscal Year 1990 quarterly rent for this office space, which is leased through the General Services Administration, is $20,519 per 3,025 sq. ft. of total space. Included in this figure is 300 square feet of conference room space for special meetings of the nine-member Board of Directors, and for use throughout the year for interagency meetings.

The average square feet of office space per work station is 121 for 25 work stations, 7 of which are used by the 7 General Schedule permanent employees assigned to the Office of the Secretary; 9 work stations for members of the Board of Directors, and 9 work stations for other personnel who are geographically located in the Republic of Panama and are assigned to the Office of the Secretary throughout the fiscal year to provide, legal, policy, financial, general and specific assistance for all matters dealing with the U.S. Congress and other U.S. Federal Government Agencies.

S-8. SENATOR LAUTENBERG. What additional costs, if any, has the Commission encountered as a result of the outbreak of Dengue Fever in Panama? Does the Commission pay the health care costs for all Commission employees? Does it provide health insurance for any or all of the Commission's employees?

Answer. The Commission has incurred no significant additional expense to prevent the spread of the *Aedes aegypti* into the Canal area, as the Commission has a long standing program in place to control the mosquitoes around employee quarters and other facilities.

The Commission pays the employer's contribution for eligible employees enrolled in group health plans which are authorized under Federal Employees' Health Benefits Act, as well as for employees covered by the Panama Social Security System. Other health care costs covered by the agency are those resulting from job related injuries as specified by the Federal Employees' Compensation Act (FECA).

9. SENATOR LAUTENBERG. In your report of significant activities for February 1990, you reported that 10 out of every 100 houses within Panama were infested with the larvae that could give rise to Dengue Fever. Has a similar survey been done for homes within the Canal area? If so, what were the results?

Answer. The yards, patios, and surrounding grounds of 1,250 housing units on the Pacific side of the Isthmus and some 300 Atlantic side housing units are under constant surveillance by

Panama Canal Sanitation Branch "larvae hunter" teams. In addition, joint surveillance teams of the Panama Canal Commission and the Government of Panama make searches in the vicinity of over 800 adjacent housing units which have been transferred to Panama during the post-treaty period. As of this date, only a few isolated breeding sites of Aedes aegypti have been found within Commission housing areas, and a few more have been discovered in adjacent transferred housing areas. There is however, no ongoing infestation within these areas, as focused control efforts have eliminated all traces of this species in each instance. Considering the infrequent nature of such breeding, should a house index be computed, it would be far less than 0.5% even for February, 1990, when a high of 8 positive breeding foci were found in the combined Commission and transferred Pacific housing areas. No Aedes aegypti were found in Atlantic housing areas this year.

All Commission grounds are well maintained and sanitized, leaving few breeding sites for this mosquito to infest. Thus, Commission areas are not considered as being infested at this time, but sanitation mosquito surveillance teams maintain their operations at a heightened state of alert.

S-10. SENATOR LAUTENBERG. On page 26 of the justification, you note that operating expenses for financial management include costs to conduct comprehensive internal audits. How many such audits are executed each year? Have there been any significant findings regarding the adequacy of bookkeeping and management practices at the PCC?

Answer. The number of audits done during fiscal years 1988 and 1989 were 35 and 31, respectively.

The latest audits for fiscal year 1989 disclosed that (1) financial transactions were reported, classified and recorded in the accounts in conformity with generally accepted accounting principles, (2) financial information in the statements prepared for the fiscal years 1989 and 1988 annual reports was accurately taken from the general ledger accounts, (3) the statements present fairly the financial position of the Commission at September 30, 1989 and 1988, and the results of its operations for the fiscal years then ended, (4) financial transactions tested were in compliance with applicable laws and regulations, and (5) internal controls related to the major account classifications are adequate in design and are operating effectively. The review and evaluation of the Commission's system of internal accounting controls disclosed no condition which the Inspector General believed to be a material weakness.

S-11. SENATOR LAUTENBERG. Please provide a brief description of all reports and audits executed by the Inspector General in 1989 and 1988.

Answer. The information follows.

Fiscal Year 1989

Audit	Description
Inventory Observations	Four inventory observations and review of controls over inventories. The primary objective of the audits is to verify the accuracy of the inventory balances.
1. Locks parts	
2. Acids, chemicals, explosives cleaning supplies, alcohol, lubricants, paint, lumber, plywood, recreational supplies, fire fighting supplies, glass, cement, rope, wire rope	
3. Diesel engine parts, dredging equipment parts	
Cash Verifications	Surprise cash verifications of agent cashiers. The Treasurer's funds were verified several times due to a large increase in activities as a result of the banking crisis in the Republic of Panama. One audit disclosed a cash shortage and recommendations were made to increase controls.
1. Treasurer	
2. Treasurer	
3. Transportation Svc. Br.	
4. Assistant to the Administrator	
5. Meteorological & Hydrographic Br.	
6. Treasurer	
Operational Audits	
1. Destruction of Checks	Verification of accountability over payroll checks and certification of destruction of outdated checks.
2. Transfer of Agent	Verification of accountability for agent cashier upon transfer to an incoming agent. This verification is done whenever the outgoing agent is unavailable for the transfer.

3. Review of Controls Over Blank Check Stock	Reviewed controls over blank check stock. Checks on hand were inventoried and reconciled to book balances. Improvement in controls were recommended.
4. Alterations to Material Orders	Review of operations at one division disclosed some material orders which appeared altered after approval. This audit was merged with a subsequent audit.
5. Overtime - Industrial Division	Several allegations of overtime abuse at the Industrial Division were investigated. The investigation showed that all but one allegation had no merit. For one allegation, records did not always support the claimed overtime. Recommendations were made to improve controls at the field level.
6. Floating Equipment Staff	This review concentrated on staff assignment practices for floating equipment. Due to operational changes during the audit, no recommendations were made.
7. Control over Material Supplies - Locks Division	This is an extensive review of and controls over consumable supplies and materials at the three locks. Weaknesses in controls were discussed with managers. A report is pending.
8. Survey of Plant Inventory	Review of balances recorded for major plant items. The audit was made in support of the audit of balance sheet accounts at year-end.
9. Missing Payroll Checks	Accounting Division reported the loss of three payroll checks. Investigation showed that an employee at the Navigation Division had stolen the three payroll checks. Action was taken to recover the misappropriated funds.
10. Review of Locks Division Major Plant Items	Verification of inventory practices and controls over major assets.
11. Material Order Control	Special review of material order controls over backorders. Review showed that controls were not adequate. The issue was discussed

	with managers. The investigation of possible theft continues.
12. Government Transportation Requests	Review of controls over government transportation requests.
13. Vacancy Announcement	Investigation of an allegation that management cancelled an announced vacancy improperly. Review concluded that management acted within prescribed authority.

Financial Audits

1. Accounts Payable-Special	A review of the internal controls covering retention of operator identification codes in the Accounts Payable System was conducted. Review showed that the automated system did not retain operator identification beyond two weeks. Upon our recommendation, a special report was established to track operator identification.
2. Payroll	Review of controls over payroll transaction. The FY 89 audit concentrated on system changes.
3. Bus Contracts	Due to the political situation in Panama, the Commission contracted for bus services to transport workers. The audit verified payments for the service.
4. Accounts Under Congressional Spending Limitation	Review of controls over and expenditures for official on reception and representation. The audit resulted in several reclassifications of expenditures and some recommendations for improvement to controls. The audit concluded that limitations were not exceeded.
5. Accounts Payable	Review of Commission payables to verify accuracy of payments and adequacy of controls. Results of review were incorporated in report on financial operations of the Commission.
6. Undelivered Orders	Review of obligation of funds at year-end to verify amounts ordered but not received and those received but not paid.
7. Tolls and Related Revenue	Tolls represent the single most important source of income for the Commission. This audit verifies the

	accuracy of tolls revenue recorded in the accounts and examines internal controls over all transit type income.
8. Year-End Balance Sheet Audit	This audit is the annual examination of Commission accounts for the purpose of expressing an opinion on the financial statements of the Commission and appraising internal controls. The report for FY 89 disclosed no major weaknesses in controls.

Inventory Observation

1. Chemicals, fertilizers, explosives, cleaners, solvents, lumber, hardware, petroleum products, rope	Three separate inventories of operating supplies were observed by auditors. Inventory balances were verified and controls examined.
2. Electronic parts and supplies	
3. Hoses, pipes, fittings, steel, electrical supplies	

Cash Verifications

1. Treasurer	Funds entrusted to agent cashiers are verified periodically on a surprise basis. At the same time, auditors verify controls over cash and propriety of transactions.
2. Community Services	
3. Area Coordination	
4. Canal Operations (Northern District)	
5. Public Affairs	
6. Administrative Svc.	
7. Canal Operations (Southern District)	
8. Treasurer	
9. Treasurer	
10. Treasurer	

Operational Audits

1. Review of Accountable Forms	Observation of the destruction of unneeded accountable forms.

2. Review of Gasoline	The Commission contracted for the Drum Stock delivery of gasoline in drums. Recommendations were made to control delivery and improve safety.
3. Review of Paper Disposal	Review of controls over the collection and disposal of sensitive documents.
4. Safe Deposit Box	Observation of the forceful entry to a safe deposit box.
5. Sale of Food Boxes	Review of controls over sale of emergency food boxes to Commission employees.
6. Destruction of Checks	Accounting for and observation of destruction of outdated payroll checks.
7. Investigation of Missing Check	A payroll check was reported lost by an employee of the Marine Bureau. Investigation was inconclusive as to how check was lost.
8. Motor Transportation Division (Northern District)	Review of selected operations of the motor transportation facility on the Atlantic side of the Isthmus.
9. Tire Shop Operations - Motor Transportation Division	Review of controls over spare tires and the recapping facility.
10. Control over Spare Parts	Review of repair parts for motor vehicles. The report included losses in parts for grass cutting equipment. As a result of the audit, controls were improved and several employees received adverse personnel actions. Recovery of some of the loss was possible.
11. Review of Controls over Material Order Rejects	Material orders are used by Commission units to request parts from the Logistical Support Division. This audit reviewed controls over procedures for handling rejected material orders.
12. Gun Control	Canal Protection Division is theonly Commission unit utilizing firearms. The audit

	concentrated on controls over firearms and accountability over the guns. Improvements to controls were recommended.
13. Control of Vehicle Batteries	Motor Transportation Division is responsible for controlling batteries for motor vehicles. Review of controls showed that controls needed improvement. Also, warranties for batteries were not always considered when excessing defective batteries.
14. Review of Controls over Window Air Conditioners	The Commission owns and maintains hundreds of window air conditioners. Review showed that controls could be improved to ensure full accountability
15. Fuel Issues	The Commission was procuring fuel for small launches from a yachtclub. Review of the contract arrangement showed that the Commission had an option to negotiate a better rate. Contract was renegotiated.
16. Excess Disposal	This review was started in FY 87 and completed in FY 88. It covered a thorough review of excess disposal procedures and controls. Recommendations were made to provide better control and safe guards over excess stocks and ensure better prices on sales.
17. Panama Procurements	This audit was started in FY 87 and reported in FY 88. The report discussed how efforts to carry out Panama preferences in procurements contributed to instances in which the Federal Acquisition Regulation was not fully complied with.

Financial Audits

1. Tolls and Related Revenue	This audit reviews controls over the collection of tolls and transit related revenue. The audit concluded that controls over tolls and related revenues were adequate.
2. Payroll	Selected aspects of the payroll function were tested. FY 88 concentrated on timekeeping controls at field offices. No major problems were noted.

3. Accounts under Congressional Spending Limitation	Review of controls over funds appropriated for official reception and representation. The audit reviews charges to these accounts and evaluates controls.
4. Accounts Payable	The audit verifies payables of the Commission through statistical sampling methods. Adjustments to accounts are processed as the audit discloses differences. No major control weaknesses were noted.
5. Review of Billings for Water	The controls over billing methods for metered water was reviewed. At the time of the audit, a new automated system was being refined. Some recommendations were made to improve existing controls.
6. Undelivered Orders	The review is made to determine if amounts reported as undelivered orders at the close of the fiscal year represent valid obligations of Commission funds. Adjustments to accounts are processed before the year-end closing.
7. Year-end Balance Sheet Audit	The audit covers extensive testing and verification of Commission accounts to determine that the financial statements of the Commission present fairly its financial position and the results of its operations in accordance with generally accepted accounting principles.

S-12. SENATOR LAUTENBERG. Please provide an assessment of the status of all recommendations made by the Inspector General regarding management practices at the PCC.

Answer. The Inspector General Act Amendments of 1988 require management action on all recommendations by the Inspector General. Specifically, two levels of action are defined. First a "management decision" refers to the evaluation by management of the findings and recommendations included in an audit report and the issuance of a final decision by management concerning its response to such findings and recommendations. Second, "final action" refers to the completion of all action that management has concluded, in its management decision, necessary with respect to the findings and recommendations in an audit report.

As of June 20, 1990, a "management decision" has been made for all audit reports issued; there are two audit reports for which "final action" has not been reached. These two reports concern recommendations for which management requires protracted action.

Implementation is on target in accordance with the management decisions reached on the audit reports.

S-13. SENATOR LAUTENBERG. How many staff operate within the Office of Inspector General?

Answer. The Office of Inspector General has an authorization of 22 full-time persons. This includes 20 professionals and 2 administrative persons.

S-14. SENATOR LAUTENBERG. On page 27 of the justification, you provide a brief description of the Joint Personnel Policy Program. Please provide a lengthier description of how this program works. What is the mission of the program? How long has it been functioning? How does it operate? Do other federal agencies contribute funds towards this program? What is its overall budget?

Answer. The 1955 Memorandum of Understanding between the United States and the Republic of Panama pledged that legislation would be sought to provide for interagency uniformity in the then "Canal Zone" in matters related to such things as employment, basic pay and job classification. Such legislation was approved on July 25, 1958 by Public Law 85-550 which authorized the establishment of the Canal Zone Merit System, and the system was established on January 19, 1959. As mandated by the Panama Canal Act of 1979, Public Law 96-70, the Canal Zone Merit System was replaced by the Panama Canal Employment System (PCES), which was established on March 31, 1982. The PCES is subject to the provisions of the Panama Canal Treaty of 1977; is based on considerations of merit and fitness for employment; conforms generally to the policies, principles and standards applicable to the competitive service in the United States; and in the case of citizens of the United States, provides for the appropriate interchange of those employees between positions under the PCES and positions in the competitive service in the United States. Under the general direction of the Panama Area Personnel Board, the Central Examining Office oversees the implementation of the PCES with respect to recruitment, examination, applicant qualifications, and similar matters.

In addition to the Panama Canal Commission, the United States Southern Command (which includes Army, Navy, and Air Force components) contributes funds toward the operation of the Joint Personnel Policy Program, coordinated by the Panama Area Personnel Board. The overall annual budget of the Panama Area Personnel Board and the Central Examining Office for 1991 is $864,000.

S-15. SENATOR LAUTENBERG. Have there been any significant changes in the number of job applicants at the Commission? Has the Commission had difficulty recruiting individuals for any type of position within the Commission? Are there adequate programs to train Panamanian citizens in all job types available within the Commission's operation?

Answer. During the last three years there has been a noticeable increase in the number of job applicants for Federal employment in the Canal area. This has been due primarily to the high incidence of unemployment in the metropolitan areas of Panama caused by the economic/political crises in the country. Also noteworthy is the increased number of professionals seeking employment, particularly from the banking and construction industries.

The Commission has had no recruitment difficulties. The Commission has established programs to train Panamanians in occupational fields in which the local labor market would not provide adequate numbers of qualified candidates. Included are:

The Apprentice Training Program - Designed to train journeyman craftsmen in the various crafts utilized in the agency [e.g. electrician, welder, machinist, shipwright, electrician (high voltage), electronic mechanic, automotive equipment mechanic, heavy equipment mechanic.

The Pilot Understudy Program - Trains maritime academy graduates licensed as merchant marine deck officers to become Panama Canal Pilots.

The Mate Trainee Program - Trains qualified personnel to become Towboat Masters.

The Career Intern Program - Prepares college graduates for various managerial and technical disciplines in the Commission (e.g. personnel, engineering, computer programming, accounting, auditing, contract administration, general management).

S-16. SENATOR LAUTENBERG. What policies are in place for the selection of individuals for incentive awards?

Answer. Individuals are selected for the various categories of incentive awards based on the following guidance:

AN OUTSTANDING PERFORMANCE AWARD is granted to an individual whose performance, during the entire period under consideration, excelled in all factors used to evaluate the performance. For a certificate only, the period must cover a minimum of 90 days. To be eligible for a cash award, the period must cover at least six months. For a quality step increase, the period must cover 12 months, with the high-level performance expected to continue in the same or similar position at the same grade level in the same unit for at least an additional 60 days. The employee may not have had a quality step increase in the last 52 weeks nor received any more than two previous quality step increases in the same grade.

A SUPERIOR PERFORMANCE AWARD recognizes performance that exceeded the normal job requirements in all relevant appraisal factors. The period must cover at least six months.

A SPECIAL ACT OR SERVICE AWARD recognizes a significant achievement that is related to official employment or that is in the public interest. This award is appropriate for a permanent or temporary employee, or a group of employees, whose performance substantially exceeded job requirements during a period of temporary employment, or while on a temporary promotion, detail, special assignment or a project. A written narrative justification is required. Recommendations for this award must be submitted within 90 days of the achievement or accomplishment.

A DISTINGUISHED SERVICE AWARD recognizes exceptional and exemplary performance over a period of years. It is the most prestigious performance award granted by the Panama Canal Commission.

A CERTIFICATE OF APPRECIATION recognizes meritorious efforts which support the successful accomplishment of the Commission's mission. This award is not to be used to recognize an employee's job performance.

AN ACCIDENT-FREE SERVICE AWARD is granted to an employee based on years of service without an injury or occupational illness requiring more than first aid treatment.

AN EQUAL EMPLOYMENT OPPORTUNITY AWARD recognizes contributions to the achievement of the Commission's goals.

A SUGGESTION AWARD recognizes constructive proposals by employees or groups of employees, that directly benefit the agency by saving money, time, supplies, equipment, labor, or materials, or by improving the efficiency or effectiveness of Commission or Government operations.

S-17. SENATOR LAUTENBERG. What portion of the personnel of the Commission receive education and health care services from the Department of Defense? What characterizes the individuals who receive these services?

Answer. U.S. citizen Commission employees and their dependents are eligible to receive health services from the U.S. Army Medical Department Activity (MEDDAC). In addition, laboratory work, x-rays and electrocardiograms are performed by MEDDAC for the Commission for required pre-employment physicals and periodic health evaluations. These number about 2,500 annually. Also, non-U.S. citizen employees who are covered by the Federal Employees' Compensation Act (those hired before treaty implementation date), are eligible for MEDDAC health services related to performance-of-duty injuries/illnesses. In cases of acute emergencies, an employee injured on the job is taken to the nearest medical facility, which may be a MEDDAC facility, regardless of eligibility. After stabilization, ineligible employees are referred to another hospital. Dependents of U.S. citizen employees are eligible to receive education services from the Department of Defense Dependent Schools System. In addition, a small number of dependents of Panamanian employees are eligible for education services based on attendance at Canal Zone Government schools prior to the treaty implementation date.

S-18. SENATOR LAUTENBERG. What are the home leave travel policies for personnel working for the Commission?

Answer. Commission home leave benefits are provided within the framework of the Federal Travel Regulations. Government-paid home leave travel every other year is granted to an employee's actual place of residence at the time of employment (APRTE) or to an alternate designation. The cost of travel to the alternate destination may not exceed that to the APRTE. An employee is required to sign an agreement for a period of additional service prior to home leave travel.

U.S. citizens employed before treaty implementation date and employees of any nationality hired from outside the Republic of Panama after that date are eligible for home leave travel. Eligible employees who lost military postal, post exchange, and commissary privileges October 1, 1984 are entitled to additional home leave travel as an offset, in accordance with P. L. 96-70, section 1210. Thus, this group of employees is eligible for home leave travel annually.

S-19. SENATOR LAUTENBERG. Why was there such a significant increase in Commission unemployment costs from 1989 to 1990? Why does it continue to grow in 1991?

Answer. The estimates for unemployment costs are provisional in nature. As it is difficult to project when employees may retire, which states they may retire to, and if they will apply for unemployment benefits that the Commission may be responsible for, the exact amounts of these costs are uncertain. The $22,000 increase in fiscal year 1990 over 1989 recognizes the uncertainty. In 1991 this amount has been adjusted for inflation.

S-20. SENATOR LAUTENBERG. Why do you anticipate that your contribution to FERS and the Thrift Savings Plan will decline in 1990 and then increase in 1991 to a level below the amount actually expended in 1989?

Answer. It is anticipated that in fiscal year 1990 there will be a lower number of Commission employees enrolled in FERS and the Thrift Savings Plan due to retirement of these employees. The increase in FY 1991 over the 1990 level is attributed to inflation.

S-21. SENATOR LAUTENBERG. On page 33 of the justification, you provide a detail of full time equivalency for PCC staff. Under "administrative and general", you show 20 FTEs in the category "other general corporate" in both 1989 and 1990, but no FTEs under this heading for 1991. What activities were these personnel involved in 1989 and 1990, and why will this function cease in 1991?

Answer. Twenty temporary guards were employed during 1989 at the height of the political crisis in Panama. Additional security personnel was required in different areas not normally covered by the Canal protection guard force. Employee unrest, demonstrations, civil disturbances, transportation difficulties and heightened tensions required additional security throughout Canal installations. After Operation Just Cause, these guards are retained through the end of the fiscal year 1990 to provide assistance to the newly established Panama National Police as they continue to develop their police force. At this time, it is not anticipated that these additional guards will be needed after fiscal year 1990 and, therefore, they are not included in the 1991 program.

JUSTIFICATION QUESTIONS

S-22. SENATOR LAUTENBERG. In your detail of offsetting collections (p. 4), you show declining collections anticipated in 1991 for fire protection services and housing rentals. Why do you expect a decline in collections in these two areas?

Answer. The 1991 decline in collections for fire protection services results from a redirection of some firefighting personnel to provide primary protection for the locks and vessels transiting the Canal. The costs associated with this function are related solely to transit operations, and therefore are not included in the structural firefighting costs which are shared with the local DOD agencies.

The decline in housing rentals reflects a normal attrition of U.S. citizen employees, which is partially offset by a rental increase.

S-23. SENATOR LAUTENBERG. Please provide detailed information on the extent to which the Commission subsidizes housing for U.S. citizen employees as well as Panamanian and third-country national employees. What is the extent of the subsidy? Is it the same for all three groups? What dollar figures do you attach to this annual subsidy, and how have theses figures changed over the three previous years?

Answer. In the application of employee housing rental rates, no distinction is made by citizenship. There is, however, a segment (approximately 65%) of the U.S. employee renters who receive free rent in connection with the equity package designed to offset the higher living costs of these employees who must shop in the local economy, having lost the right to shop in the military retail facilities. The actual unrecovered costs from renters for the three previous years is as follows:

	FY 1987	FY 1988 (In thousands)	FY 1989
Total Operating Costs	$ 6,380	$ 5,552	$ 5,419
Less: Commission Housing Units*	(1,249)	(1,225)	(1,260)
Equity Package	(2,238)	(2,285)	(2,190)
Rental Income	(1,640)	(1,525)	(1,499)
Unrecovered from renters	$ 1,253	$ 517	$ 470

*Commission housing units are units held for Official use purposes and vacancies.

The distribution of these unrecovered costs by citizenship, based on the percentage of rent paid by each group occupying Commission quarters is as follows:

	FY 1987	FY 1988 (In thousands)	FY 1989
U.S. Employee Renters	$ 952	$ 383	$ 302
Panama Employee Renters	125	50	41
TCN Employee Renters	66	27	23
Contractors	61	27	28
Others	49	30	76
	$ 1,253	$ 517	$ 470

S-24. SENATOR LAUTENBERG. On page 23, you note that housing revenue is derived from the rent charged to certain Commission employees who are not eligible for the equity adjustment and other individuals who are eligible for these quarters. Please describe the policies that determine which employees are eligible for the equity adjustment, and which are not. What qualifies an individual to be eligible for housing in the Canal operating areas? What other individuals who are not employees of the Panama Canal Commission are eligible for living quarters in the Canal operating areas?

Answer. To be eligible for the equity adjustment package, the employee must have been employed by the Panama Canal Company or the Canal Zone Government on September 30, 1979, be a U.S. citizen, and have experienced an increased cost of living as a result of the loss of military sales and commissary privileges on October 1, 1984. The equity adjustment package is provided to employees in lieu of the cost of living allowance (COLA) provided for in Sec. 1206 of the Panama Canal Act of 1979 (P.L. 96-70).

To be eligible for housing in the Canal operating areas, an individual must be a U.S. citizen currently employed by the Panama Canal Commission. Third-country nationals employed by the Panama Canal Company as of September 30, 1979 are also eligible. In addition to PCC employees, contractors and subcontractors organized under the laws of the United States, who have contracts awarded by the Commission, and their employees who are nationals or residents of the United States, are also eligible for living quarters in the Canal operating areas. Also, as specifically approved by the Government of Panama, a small number of key Panamanian employees of the Canal are authorized to reside in Commission quarters.

S-25. SENATOR LAUTENBERG. In your statement of financial condition of the revolving fund (p. 5), the funded accrued liabilities payroll and benefits line shows an increase consistent with other increases between 1989 and 1990, but a decrease below the 1989 level anticipated for 1991. Please explain the reason for this decrease.

Answer. The funded accrued liabilities payroll and benefits line reflects in 1991 a net effect of an increase in the estimated liability in employee's leave associated with annual pay raises and a decrease in the amount for salaries and wages payable to employees.

S-26. SENATOR LAUTENBERG. On page 7, you provide data on free transits of the Canal. What entitles a vessel to a free transit of the Canal? Under what circumstances do you allow free transits?

Answer. Pursuant to the 1914 Treaty for the Settlement of Differences between the United States and the Republic of Colombia, the latter was granted the right to transport through the Panama Canal its troops, materials of war and ships of war without paying any charges to the United States. That treaty remains in effect and, accordingly, in Article VI of the 1977 Treaty concerning the permanent neutrality and operation of the Panama Canal it is provided that the United States may continue to provide Colombia with these toll-free transits.

No other vessels of any nationality transit the Canal without paying tolls.

S-27. SENATOR LAUTENBERG. How close were your traffic and toll projections to actual performance for 1989? How close are your projections to the actual performance for tolls and traffic for the first two quarters of 1990?

Answer. The severe downturn in Canal traffic and tolls revenue that occurred in fiscal year 1989 resulted in actual performance below the budget targets. Oceangoing transits fell 3.0 percent from the budget estimate and tolls revenue was 4.6 percent below the programmed level. Through the first eight months of fiscal year 1990, actual performance shows oceangoing transits 1.3 percent below the forecast and tolls revenue 2.7 percent short of the target.

S-28. SENATOR LAUTENBERG. On page 24, you anticipate a decrease in the cost for the official residence, from $68,000 to $62,000. Please explain this decrease.

Answer. The anticipated decrease in 1991 in the cost for the official residence reflected on page 24 is due to the completion of exterior painting of the residence.

S-29. SENATOR LAUTENBERG. You are anticipating a 23 percent increase for guide services expense in 1991. Why do you expect such a significant increase in this area?

Answer. The anticipated increase in guide services expense in 1991 is principally attributed to the addition of a second set of stairs at the Miraflores Locks Visitor's Pavilion to enhance safety at this facility.

S-30. SENATOR LAUTENBERG. In the area of consultants and advisors, you had a very precipitous drop in this area from 1989 to 1990, and you now expect an increase in this expense in 1991. Please explain the decline from 1989 to 1990, and what will cause the expense to increase in 1991.

Answer. The decline reflected in 1990 for consultants and advisors is mainly attributed to lower requirements for toll revenues forecast studies. In 1991, the increase is due to requirements related principally to canal improvement studies.

TOLL REVENUE

S-31. SENATOR LAUTENBERG. Have you re-estimated your anticipated toll revenue for 1991, based on any changes in traffic in the first two quarters of 1990? If so, please provide your new anticipated level of toll income in the format displayed on page 7 of the justification.

Answer. The toll estimates shown on page 7 of the justification were revised for fiscal year 1991 from $366.7 million to our current estimate of $364.0 million, as shown on the following table.

Tolls	FY 1991 estimate (Dollars in thousands)	
Commercial traffic:		
Ocean-going........................	$362,337	
Small craft........................	110	
Total commercial tolls........	$362,447	
United States Government traffic:		
Ocean-going........................	1,537	
Small craft........................	16	
Total U.S. Government tolls...		1,553
Total tolls revenue...........		$364,000

S-32. SENATOR LAUTENBERG. In last year's hearing record you noted that you do not collect statistics on toll revenue by commodity. Since the Commission continues to experience significant changes from year to year in the mix of commodities transiting the Canal -- i.e., oil, cars, grain -- how can you accurately project the level of toll revenue if you do not know how much toll revenue you are collecting by each commodity?

Answer. The method of assessing tolls on transiting ships is based on the ship's tonnage, whether the ship is transiting laden or in ballast, and not on the types of commodities carried aboard. Statistics on tolls revenue by commodity, thus, cannot be maintained on a systematic basis. Effective toll revenues (dollars per cargo long ton) for key Canal commodities, however, are developed in the commodity analyses performed as part of the forecasting process. The analysis to develop these effective toll revenues takes into account the types of vessels utilized in transporting a given commodity, the portion of the revenue that should be attributed to the given commodity when several other types of commodities are being carried by the same ship, and the revenue from ballast transits that are considered to be generated by the commodity. These effective toll revenues by commodity, which vary from time to time depending on load factors and technological changes made to the ship, are only estimates, but serve to determine approximately the revenue collected from each commodity and to establish the impact of fluctuations in any of the key Canal trades.

S-33. SENATOR LAUTENBERG. In last year's hearing record (p. 1123), you noted that you were preparing commodity forecasts that will be available for release in the near future. Please provide those forecasts for 1990 and 1991. Please also note how accurate those forecasts were for the first two quarters of 1990.

Answer. The attached table shows the FY 1990 and FY 1991 commodity forecasts that correspond to the budget figures being presented, as well as a comparison of the actual results with the projections (without seasonality adjustments) for the first eight months of FY 1990.

Cargo Forecast by Commodity Group
(Thousands of long tons)

	FY 1990	FY 1991	FY 1990 (Oct '89-May '90)	
			Actual	Forecast
Bananas	1,374	1,399	1,097	915
Reefer, Other	3,704	3,743	2,634	2,466
Chemicals	5,756	6,049	3,385	3,832
Petroleum Chem.	2,032	2,007	1,143	1,353
Coal & Coke	8,628	8,348	5,654	5,744
Grains, Other	14,675	15,448	11,201	9,770
Soybeans	5,659	5,825	4,289	3,767
Wheat	10,658	10,974	4,107	7,096
Lumber Products	6,597	6,623	4,135	4,392
Pulpwood	3,264	3,251	2,071	2,173
Automobiles	1,826	1,794	1,136	1,216
Iron & Steel	7,522	7,503	4,717	5,008
Minerals, Misc.	4,147	4,202	4,120	2,761
Phosphates	8,671	8,473	5,542	5,773
Fertilizers	5,748	6,015	3,562	3,827
Alumina/Bauxite	2,403	2,538	2,334	1,600
Ores, Other	4,560	4,608	3,217	3,036
Scrap Metal	1,807	1,719	1,582	1,203
Metals, Other	1,840	1,911	1,285	1,225
Sugar	3,026	2,929	2,403	2,015
Petroleum Crude	7,781	8,257	6,092	5,180
Petrlm. Resid.	4,077	4,318	3,378	2,714
Petroleum Coke	3,286	3,468	2,096	2,188
Petroleum Prod.	6,839	7,050	4,707	4,553
Paper	1,418	1,508	908	944
Food & Agric.	3,096	3,146	1,895	2,061
All Other	2,079	2,152	1,302	1,384
Containerized	19,906	20,289	13,740	13,252
Total	152,379	155,547	103,732	101,448

S-34. SENATOR LAUTENBERG. How extensive is the research you perform to project the mix of commodities that you expect to transit the Canal in future years? How extensively do you monitor the oil market, the grain market, the automobile market? To what degree do you find that changes in these markets influence the amount and commodity mix of Canal traffic?

Answer. The development of the Canal traffic forecasts includes extensive market analysis and continuous research of economic and trade material. In addition, economic surveys are conducted each year, involving personal meetings with Canal users, major decision makers throughout the maritime industry and others knowledgeable about trade and transportation patterns. This allows the obtainment of first hand information on trades such as grain and automobiles as they affect Canal traffic. The forecasts are mostly developed by our in-house economic staff and, on occasion, by independent consulting firms under contract to the Commission. During the past year we have additionally relied on a forecasting service provided by Temple, Barker & Sloane (TBS) in conjunction with Data Resources Institute, Inc. (DRI). The service provides cargo forecasts specifically tailored to Canal routes and commodities. These forecasts are analyzed and adjusted by Commission economists, as necessary.

Canal trade is highly concentrated in the grain, petroleum, automobile and containerized cargo trades, with these movements accounting for an estimated 57 percent of total Canal tolls revenue. As a result, fluctuations in any of these trades have the potential to significantly impact on overall Canal traffic performance. Accordingly, these important commodities are analyzed and monitored extensively on an ongoing basis.

MISCELLANEOUS

S-35. SENATOR LAUTENBERG. What procedures and response mechanisms are in place to control oil and chemical spills in the Canal? What vessels and other assets are available to respond to such spills? What training do Canal personnel receive for handling such incidents? Please provide data on any incidents that have taken place in recent years.

Answer. The Commission has developed an Oil Spill Contingency Plan that establishes the procedures to respond to an oil spill. Nineteen 20-foot containers equipped with oil booms, sorbents, other equipment and materials needed in the containment and removal of spilled oil are located strategically along the Canal. Upon notification of a spill, through the regular channels of a response action, a pre-designated representative will investigate and initiate action as necessary. Equipment available to the oil Contingency Plan includes two self-propelled 35-foot oil recovery vessels equipped with a 30-barrel capacity sump, three Komara mini oil skimmers, four 4,000 gallon semi trailer vacuum units and 21,760 feet of oil containment boom strategically located along the Canal. Other equipment includes 37 aluminum punts (16 ft.), one 16 ft. Boston Whaler, two 18 ft. Rustabout aluminum boats, two 24 ft. workboats, and five 1.5-ton pickups. In case of a major oil spill, other Commission's floating and land equipment and personnel is available.

The Chief of the Commission's Dredging Division and the Cleanup Coordinator have been trained for oil and chemical spills at the Coast Guard School in Norfolk, VA. The supervisory personnel consisting of three biologists, one engineering technician, and four biological technicians have attended at least one seminar in oil pollution control. The manual workers receive training in the operation of the different oil containment and recovery equipment. During fiscal year 1989, the Commission responded to 19 minor oil spills in Panama Canal waters. Also, there were two oil spills of over 1,000 barrels as follows:

a. On March 10, 1989, the M/V PROBO BARO was holed by the M/V ISLA SANTAY in the Balboa Anchorage area. Approximately 1,500 barrels of oil went into the water.

b. On May 11, 1989, the oil tanker M/V ERICA JACOB hit the west side of Miraflores Locks. More than 1,200 barrels of heavy fuel oil went into the water.

S-36. SENATOR LAUTENBERG. Are the Commission authorities always aware of exactly what chemicals or other liquid products are on each and every tanker that transits the Canal, and how to respond to spills of these products? What about hazardous materials in containers? Do Canal personnel periodically execute drills to test their level of readiness for such incidents?

Answer. All vessels are required to provide 48 hours advance notification of dangerous cargo information for bulk and containerized shipments.

Tankers are required to give technical name, United Nations number, International Maritime Organization (IMO) class and division, quantity and ship location of every cargo carried. This advanced information is placed into the Marine Traffic Control Computer System and is used as the main reference for response purposes. Additionally, the tanker provides a "Loading Plan" to a Boarding Officer when the ship arrives to confirm advance cargo information.

Containerized or packaged cargoes are reported by their International Maritime Organization (IMO) class and division which identifies their principal hazard. A Dangerous Cargo Manifest (DCM) is also given to the Boarding Officer on arrival. Containerized cargoes are controlled through IMO and U.S. Coast Guard regulations on packaging, maximum quantities, stowage, segregation, labeling, and container design among other requirements. The risk involved in transporting containerized dangerous cargo is thus reduced to a minimum.

The Marine Safety Unit is responsible for exercising the "Vessel Emergency Reaction Plan" (VERP) regularly in different scenarios and the detailed review of responses to actual incidents. The Locks Division has developed the "Locks Emergency Reaction Plan" for dealing with emergencies within the locks chambers and the periodic testing and evaluation to this plan.

S-37. SENATOR LAUTENBERG. What has been the record for accidents in and outside the locks and in the terminal port areas over recent years? Please provide the accident record for 1989 and the three preceding years.

Answer. The information follows:

NUMBER OF VESSEL ACCIDENTS INVESTIGATIONS
Conducted During FY'86 - FY'89

	Total In Locks	Total Out-of-Locks	Terminal Port Areas
FY 86	18	24	2
FY 87	10	26	1
FY 88	17	28	1
FY 89	13	28	4
Total	58	106	8

S-38. SENATOR LAUTENBERG. What are the crewing requirements for vessels transiting the Canal?

Answer. The number of crew members aboard a vessel transiting the Canal generally is fourteen for large vessels and twelve for small vessels.

All vessels must keep a full watch on deck and in the engine room during the entire transit. Additionally, while getting underway, while locking through a locks chamber and while transiting through Gaillard Cut, the vessel's master must be on the bridge and the Chief Engineer must be on duty in the engine room.

CAPITAL OUTLAY

S-39. SENATOR LAUTENBERG. Please describe all competition procedures that are used by the PCC for major acquisitions as part of the capital outlay program. Are these procedures used for all acquisitions of any size? Please describe which procedures are used for which types of acquisitions.

Answer. The competition procedures used by the Panama Canal Commission for major acquisitions as part of the capital outlay program are prescribed in the Federal Acquisition Regulation, Parts 14 and 15. This basic requirement incorporates all statutory provisions of the Competition in Contracting Act. The procurements are synopsized in the Commerce Business Daily into the maximum extent possible. The above procedures are used for acquisitions in excess of $25,000. Acquisitions less than $25,000 are acquired under Part 13 of the Federal Acquisition Regulation. These latter regulations are of a less formal nature than the major acquisitions acquired under Parts 14 and 15.

S-40. SENATOR LAUTENBERG. On page 37 of the justification, you note that the Canal has experienced an increase in the size and number of vessels carrying hazardous cargos including oil, carbon chemicals, and gas. Please provide a table detailing the number of vessels and the cargo tonnage for vessels carrying hazardous cargos over the three preceding fiscal years, as well as your anticipated levels for 1990 and 1991.

Answer. The following table details the number of vessels carrying hazardous cargos over the three preceding years:

	FY 1987	FY 1988	FY 1989
No. of Vessels carrying hazardous cargo	3,780	3,997	4,067

Information in terms of cargo tonnage is not readily available. Cargo tonnage statistics are not maintained by hazardous and non-hazardous categories, however, the majority of vessels are petroleum, chemical tankers and liquid gas carriers. Based upon the above experience it is anticipated that similar growth rates will occur in 1990 and 1991.

S-41. SENATOR LAUTENBERG. Please provide an update for any and all proposals to widen portions of the Canal. What is the status of discussions, proposals, studies and/or ongoing widening efforts? What costs are associated with the widening proposals under consideration.

Answer. Most elements of the Gaillard Cut-Widening Study are completed. However, the long-term forecast that was developed for the original study was revised recently to ensure that the most up-to-date and reliable estimates of future shipping traffic are considered. Because of changes in the traffic forecast, certain elements of the study are currently being revised. Once all revisions are completed, the results of the study will be presented to the Commission's Board of Directors for their review. Following this review, the study and conclusions will be presented to the appropriate Congressional Committees and the international shipping community.

If the project proves to be necessary and is undertaken, the estimated cost in current dollars is $300 to $400 million for a long-term 11-year construction period.

S-42. SENATOR LAUTENBERG. Based on your Canal traffic for the first two quarters of this year, do you anticipate running an operating loss in 1990 as you did in 1987, 1988, and 1989? Will the toll increase already implemented be adequate to more than offset any operating loss you might encounter in 1990? What about in 1991? Is there any discussion of a further toll increase anytime in the near future? What about in the next two or three fiscal years?

Answer. Although Canal traffic for the first two quarters of 1990 is somewhat under budget, we do not anticipate running an operating loss for the fiscal year. As a result of the slight decline in traffic, Commission operating programs have been rescheduled so as to stay within the available resource level. With the rescheduling of programs, the Commission will still be able to meet the agencies financial objectives of recovering the major portion of the prior years losses during this fiscal year, and recovering the balance of the losses in fiscal year 1991. At the current time, based upon the latest traffic projection and associated costs, no toll rate increase is anticipated for the next two or three years.

S-43. SENATOR LAUTENBERG. What steps are being taken to prevent landslides in and around the Canal area? Are there any ongoing construction projects to minimize the likelihood of landslides, or other erosion control projects? What costs are associated with these projects?

Answer. In order to further reduce the risk of landslides, the Commission has strengthened its landslide control program by:

-Improving the drainage system of problem slopes throughout the Gaillard Cut area, including the drilling and clearing of horizontal drainage holes.

-Increasing the number of motion-sensing devices installed throughout Gaillard Cut to regularly monitor earth movement in problem slopes.

-Reshaping problem slopes in order to reduce pressure and earth movement.

-Reforesting many of the areas where earth movement work had left the area barren of vegetation in order to stop soil erosion and help stabilize the slopes.

-Increasing the number of access roads for visual inspection and geological exploration of problem slopes and areas.

-Having an Advisory Board of consulting soil engineers experts in this field to review the Commission's landslide control program and to advise Commission engineers on specific slide movement problems as the need arises.

During the present fiscal year, the Commission is completing 4 and undertaking 5 new stability related projects at a cost of $1.8 million and 2 erosion projects at a cost of $200 thousand.

S-44. SENATOR LAUTENBERG. What about efforts to control or prevent flooding? Are there any ongoing projects to control flooding? What costs are associated with these efforts? Do you anticipate launching any such projects in the future?

Answer. Flood control procedures are reviewed, simulated and exercised every year, using existing facilities and resources. These facilities include weather radar, weather satellite and a network of rainfall stations throughout the Canal watershed which provide the vital information for flood management. There are no ongoing projects at this time, and we are not anticipating any project of this nature in the future.

S-45. SENATOR LAUTENBERG. In the Administrator's report to the Board of Directors for its January meeting, the Administrator noted that since the expected level of tolls and other revenue for the second quarter will be slightly under budget, a rescheduling of Commission programs will be required to stay within the reduced resource level. What activities and programs have been rescheduled to adjust to this lower level of anticipated revenue? What is your current expectation for meeting your revenue goals for the remainder of 1990?

Answer. In reaction to the slight down turn in traffic, the Commission rescheduled a number of programs to bring the spending levels into line with the lower level of resources. Among the actions taken, the deferral of maintenance projects for the Power system into fiscal year 1991, the reduction of routine maintenance projects for Commission buildings and employee quarters, and the deferral of other minor maintenance projects that do not impact upon the safe and efficient operation of the waterway. Currently, the Commission expects that revenue will continue to slightly underrun the projections for the remainder of fiscal year 1990.

S-46. SENATOR LAUTENBERG. What is your 1990 year-end expectation for Panamanian participation in the Commission's permanent workforce? Please provide relevant numbers and percentages.

Answer. Panamanian participation in the permanent work force increased from 5,521 employees (69 percent) to 6,513 employees (86 percent) from October 1979 to October 1989. Participation of Panamanian employees is expected to approach 87 percent by the end of this fiscal year.

EFFECTS OF OPERATION JUST CAUSE

S-47. SENATOR LAUTENBERG. On page 13 of your budget justification, you note that revenues are received from services provided to the Department of Defense, including the Navy facilities at Galeta Island. Revenues are also received for refuse disposal and grounds care services provided by contractual arrangements to DOD. Will revenues from the Department of Defense for these services or any other services increase significantly as a result of Operation Just Cause?

Answer. Revenues from the Department of Defense are not expected to increase significantly as a result of Operation Just Cause.

S-48. SENATOR LAUTENBERG. Please describe the level of damage to Canal facilities that resulted from Operation Just Cause. Please detail any repair costs that the Commission will encounter and whether or not those costs are included as part of the budget request for 1991.

Answer. The Commission sustained serious damage to two of its installations during Operation Just Cause. Three electrical transmission towers were sabotaged by enemy action on the night of the invasion. The cost of replacing the towers is approximately $380 thousand. In addition, an entire wing of the Commission's Administration Building on the Atlantic side, which was leased almost in its entirety to Government of Panama agencies, including the former Panama Defense Forces, was severely damaged by U.S. military action. The Commission is presently evaluating whether it should raze or repair that wing. All other damages sustained by Commission facilities were minor in nature, as were losses from looting. There are no costs budgeted to repair these facilities in the budget request for 1991.

S-49. SENATOR LAUTENBERG. Your budget justification notes that revenue is derived from the sale of supplies and material to the armed forces and other U.S. agencies. Revenue is also generated from scrap and salvage sales. Will your anticipated level of revenue in these areas change at all as result of Operation Just Cause?

Answer. The amount of revenues derived from these type of sales is not expected to be materially affected as a result of Operation Just Cause.

S-50. SENATOR LAUTENBERG. Is a curfew still in effect in Panama? If not, when was it lifted? I understand that the curfew worked a hardship on Commission employees and other operations of the Commission. As a result, certain costs to the Commission increased, including overtime costs to Commission employees who could not return home during curfew hours. Please provide a detailed explanation on what additional costs the Commission is encountering in the wake of Operation Just Cause.

Answer. The general curfew imposed after Operation Just Cause throughout the Republic of Panama was gradually reduced until it was finally lifted altogether as of midnight of March 31, 1990.

In addition to the overtime costs to the Commission, the additional expenses related to Operation Just Cause include repairs to Commission facilities, greatly expanded security for PCC facilities, overtime in the supporting services function, and operation of a transisthmian launch service.

S-51. SENATOR LAUTENBERG. In a number of documents you cite unanticipated costs that the Commission encountered due to the political unrest in Panama prior to Operation Just Cause. To what degree have these costs endured beyond Operation Just Cause. Have things "returned to normal" from a budgetary point of view? If not, why not?

Answer. The Commission has incurred a substantial amount of unbudgeted costs related to the transportation allowances and voluntary temporary relocation plan implemented earlier while the Noriega regime was in power. While these costs, for the most part, have ceased due to the disposal of that regime, they will still total more than $1.7 million for the current fiscal year. It is not anticipated that these costs will continue beyond this fiscal year.

S-52. SENATOR LAUTENBERG. In page 1104 of last year's hearing record, you provide an accounting for the amount of funds withheld from the Panamanian government as of March 15, 1989. What was the total amount withheld from the Panamanian government? What amount of that money has now been transferred over to the Panamanian government? What amount remains to be transferred to the Panamanian government, and what provisions are in place to transfer these funds? What timetable is in place for the transfer of these funds? Please provide these data in the same format as found in last year's hearing record, breaking out dollar levels by net tonnage payment, fixed annuity and public services payment, employees' income tax, employees' educational tax, and miscellaneous services by the Government of Panama payments.

Answer. Since the economic sanctions against the Noriega regime were imposed in 1988, the Commission has deposited $157.7 million into the Government of Panama's Account No. 3 with the Federal Reserve Bank of New York. The following tabulation identifies the amounts withheld:

Net Tonnage Payment	$ 85,696,239.13
Fixed Annuity	18,333,333.33
Public Services	18,333,333.33
Total Treaty Payments	122,362,905.79
Employee' Income Tax	32,013,563.83
Employee's Educational Tax	3,161,724.19
Miscellaneous Services by the Government of Panama	177,413.40
Grand Total	$157,715,607.21

In accordance with the instructions issued by the U.S. Treasury, the Commission ceased making deposits into the escrow account in December 1989. In January 1990, the Commission resumed making Treaty and tax withholding payments directly to the new Government of Panama.

The Commission does not have any records regarding the balance in the subject escrow account or information concerning the timetable and provisions for returning the funds. All of these matters are controlled and monitored by the U.S. Treasury.

S-53. SENATOR LAUTENBERG. Are Panamanian employees of the Commission still subject to any forms of discrimination or persecution by individuals within Panama, be they government officials or private individuals?

Answer. Panamanian employees of the Panama Canal Commission are no longer being subjected to confiscations and similar actions previously brought by the Noriega regime for non-payment of taxes. The Commission is not aware of any form of discrimination or persecution by private individuals against Commission employees.

S-54. SENATOR LAUTENBERG. In last year's hearing record, you cited the Commission's commitment to assisting those employees who encountered the confiscation or sale of their property. Such assistance included reimbursement for attorney fees in connection with administrative collection actions instituted against them by the Noriega regime. What was the total cost of these expenditures? Do you still anticipate making additional payments in connection with this commitment? Are you still making payments to employees who cannot used their privately owned vehicles for home-to-work transportation? If so, what dollar amounts are you committing to this endeavor?

Answer. The total cost for reimbursement for attorney fees resulting from actions by the Noriega regime against Commission employees has been $53 thousand to this date with only a small dollar amount still pending for review and payment. No additional expenses for reimbursement of attorney fees are expected to be incurred by the Commission.

The Commission is no longer making payments for home-to-work transportation of employees as the conditions which prevented these employees from using their privately-owned vehicles have been removed.

S-55. SENATOR LAUTENBERG. In last year's hearing record, you noted the substantial increase in the number of crimes perpetrated against employees and dependents residing in Commission housing. You also noted the increasing number of thefts of Commission property. Have these thefts continued at this increased rate following Operation Just Cause? Is the Panamanian government now providing adequate police and security services for the Canal area? Is the U.S. Southern Command taking any measures to maintain security of the Canal area since Operation Just Cause? Do you now find the level of security provided by the new Panamanian government to be adequate to protect life and property in the Canal area?

Answer. Thefts of PCC property and against PCC employees and dependents residing in PCC housing, have shown a slight decrease. The Panama Government Police (PNP) institutions are not as yet meeting the needs in providing adequate police and security service at this time. This might be due to the lack of organization and the adequate equipment required for this service.

Since early January 1990, U.S. Forces Military Police and the Canal Protection Division have been assisting the PNP patrol PCC townsites and the Canal area. In essence, these joint patrols provide vehicles for mobile patrols while the PNP acquires additional transportation resources. In addition to the joint mobile police patrols, the United States Army South's Joint Task Force - Panama (JTF-PM), has provided walking infantry patrols and provided much needed security while the PNP develops its resources for more complete coverage of those areas.

The level of security provided by the PNP is not adequate at this time to protect life and property in the Canal Area without the assistance of the US.

S-56. SENATOR LAUTENBERG. When do you expect forces in Panama to be adequate to provide adequate levels of security and an adequate penal system to protect the personnel and property in the Canal area?

Answer. It is difficult to estimate when the PNP will be in a position to provide adequate levels of security and an acceptable penal system to protect personnel and property in the Canal area. Progress has been slow to date and exacerbated by budgetary limitations, transportation deficiencies, lack of training, and low morale.

Most of the Panama Defense Forces vehicles were damaged or destroyed during Just Cause and the lack of mobility will greatly hamper the effectiveness for the short and long-term, despite the two-hundred fifty 3/4 ton pick-up trucks donated by the U.S. and the purchase of one hundred small sedans by the Government of Panama. Some basic police training has been given at all levels and plans are well underway for the establishment of a National Police Academy sponsored by International Criminal Investigations Training and Assistance Program (ICITAP). But significant improvements will probably not be visible within the next year.

S-57. SENATOR LAUTENBERG. Do any costs incurred over 1989 and the first two quarters of this year due to the turbulent political situation appear to becoming permanent costs to the Commission, costs that we can expect to recur for years in the future?

Answer. The political costs incurred by the Commission due to the political situation in fiscal year 1989 and the first two quarters of fiscal year 1990 do not appear to be recurrent. These costs resulted from actions instituted by the Noriega-regime against Commission employees. The lifting by the new Government of Panama of the sanctions and reprisals instituted by the Noriega-regime against Commission employees and the return to a normal political environment will allow the Commission to resume normal planning and execution of its programs.

S-58. SENATOR LAUTENBERG. The Administrator's report to the Board for the January 1990 meeting cites the assistance provided by Commission employees and Commission assets toward the execution of Operation Just Cause. In some cases, this involved making Commission property or services available to U.S. forces. Do U.S. forces continue to make use of these services or property, or are things back to "status quo" in this regard? Was the Commission reimbursed by the Defense Department for any services provided during Operation Just Cause.

Answer. Currently, the Panama Canal Commission is assisting the U.S. forces only in a very small scale as things appear to be getting back to "status quo". Only two housing units, a portion of a building and a bathroom facility are being made available to those U.S. forces still related to Operation Just Cause.

Services provided to the Defense Department during Operation Just Cause were non-reimbursable in nature. Most of the services and property made available by the Commission to the U.S. forces were in line with protecting Commission's property and employees.

UPDATE FROM LAST YEAR'S HEARING RECORD

S-59. SENATOR LAUTENBERG. Please update the table on page 1108 of last year's hearing record regarding your initial revenue projections dating back to 1985 in contrast to your actual revenue receipts. Please also provide a table similar to that on page 1108 comparing the toll rates before and after the recent toll rate increase.

Answer. The following tabulation compares the Commission's revenue projections versus the actual revenues realized for fiscal years 1985-1989 by tolls and other sources.

	President's Budget (Initial Estimate)	Following Year President's Budget (Revised Estimate)	Actual
Tolls		(In thousands of dollars)	
1985	315,000	310,000	300,808
1986	320,000	311,000	322,734
1987	312,000	333,000	329,859
1988	339,000	339,000	339,310
1989	358,590	345,500	329,766
Other Revenues			
1985	125,486	118,663	105,915
1986	124,573	119,473	104,658
1987	125,370	109,927	106,274
1988	117,309	110,081	110,088
1989	113,870	119,303	106,034

The following tabulation compares the Commission's toll rates before and after the October 1, 1989 toll rate increase.

	Toll Rates	
	Before Increase	After 10/1/89 Increase
Laden vessels	$1.83	$2.01
Ballast vessels	1.46	1.60
Displacement ton	1.02	1.12

S-60. SENATOR LAUTENBERG. As part of last year's hearing record, you cited your expectation that the toll rate increase will not result in a diversion of traffic from the Canal. Has that, in fact, been the case demonstrated over the first two quarters of 1990?

Answer. The Commission has not detected any impact on traffic patterns resulting from the toll-rate increase implemented on October 1, 1990. Previous studies made by the consultants indicate that this level of rate increase is well below the threshold level that would divert traffic from the Canal.

S-61. SENATOR LAUTENBERG. Please update the list as shown on page 1110 of last year's hearing record regarding those general expenditures that are part of your 1991 budget request that are not under the limitation. Please explain why you do not anticipate these costs to be subject to the limitation. Please also update the table on pages 1111, 1112, and 1113 of last year's hearing record outlining the number of positions, the compensation and average compensation for Commission personnel.

Answer. The fiscal year 1991 estimate for "General expenses not under limitation" is $41.952 million. Included in this amount are the following costs:

		(In millions of dollars)
a.	Interest expense on the U.S. Government's net direct investment in the Panama Canal ...	13.100
b.	Amortization of special retirement program (in accordance with Subchapter IV of the Panama Canal Act of 1979 Public Law 96-70) ..	15.144
c.	Cost of Training Administration and Courses ...	2.732
d.	Commission payments under the Federal Employees Compensation Act (FECA)	11.891
e.	Incentive Awards (Payments to employees to reward performance, suggestions, and length of service)	.900
f.	Alien Cash Relief and Home Care Program (Cash pensions to former non-U.S. citizen employees not covered under the Civil Service Retirement System and related health care as authorized)	1.060
g.	Miscellaneous expenses (including severance pay and offsetting depreciation credit for assets purchased with capital advance funds).	-2.875
	TOTAL OTHER GENERAL EXPENSES	41.952

The above expenses are not under limitation because they are (a) Treaty-driven (such as the special retirement cost and training), and (b) handled similar to the way they were before treaty when there was an administrative limitation (e.g. interest expense, payments under FECA and Alien Cash Relief, home care program).

Specifically, the Commission's training costs have been excluded from the administrative area because of the Treaty-mandated emphasis on accelerated training for Panamanian employees to prepare the Panamanian workforce to assume responsibility for the Panama Canal in the year 2000.

The following schedule shows current positions, basic compensation and average basic compensation/position at each grade for the Offices of Executive Direction (including the Administrator's staff, Administrative Services staff, Office of Public Affairs, Guide Services, and Office of the Commission Secretary):

Pay Level	FTP Positions	Basic Compensation	Avg. Basic Compensation
		(In Thousands of Dollars)	
Office of the Admin. and Staff:			
AD	1	78	78
CX	3	234	78
EX	4	312	78
NM-15	5	365	73
NM-14	10	627	63
NM-13	17	900	53
NM-12	13	552	42
NM-11	9	333	37
NM-10	4	129	32
NM-09	1	25	25
NM-08	2	56	28
NM-07	9	218	24
NM-06	4	82	21
NM-05	8	109	14
NM-04	4	47	12
NM-03	1	13	13
NM-01	1	10	10
MG-09	1	20	20
	97	4110	42
Administrative Services:			
NM-14	1	58	58
NM-13	2	92	46
NM-12	5	218	44
NM-11	10	382	38
NM-10	6	183	31
NM-09	8	259	32
NM-08	1	36	36
NM-07	11	266	24
NM-06	7	148	21
NM-05	11	150	14
NM-04	8	103	13
NM-03	6	78	13
NX-05	1	27	27
	77	2000	26

Office of Public Affairs:			
NM-15	1	75	75
NM-13	2	88	44
NM-12	2	90	45
NM-11	3	107	36
NM-10	5	169	34
NM-09	9	258	29
NM-08	1	27	27
NM-07	4	95	24
NM-06	1	21	21
NM-05	2	34	17
NM-04	1	13	13
	31	977	32
	==	====	==
Guide Service:			
NM-09	1	30	30
NM-08	1	26	26
NM-07	5	112	22
	7	168	24
	==	====	==
Office of Commission Secretary:			
CX	1	78	78
GS-13	4	188	47
GS-11	1	30	30
GS-06	1	20	20
	7	316	45
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S-62. SENATOR LAUTENBERG. What is your request for consultants in 1991? How does it compare to fiscal years 1989 and 1990?

Answer. The request for consultants and advisors in 1991 is a provision primarily for economic research studies, expert assistance and recommendations on accounting and toll rate policies, and studies on Canal improvements. Basically, in fiscal year 1989 and 1990 these same services are being utilized by the Commission. The amount reported for fiscal year 1989 reflects the increased requirements for tolls revenue forecasts and assessment of the impact on tolls of the implementation of the Universal Measurement System. The amount required for fiscal year 1991 is higher than the amount estimated for 1990 due primarily to requirements anticipated for Canal improvements studies.

S-63. SENATOR LAUTENBERG. In last year's hearing record, you noted your anticipated level of funding for consultants and advisor services to be $315,000. Does this continue to be your estimate for 1990 after the experience for the first two quarters?

Answer. It is anticipated that the agency's actual expenditures in fiscal year 1990 will be below the $315,000.

S-64. SENATOR LAUTENBERG. Please update the listing on page 1119 of last year's hearing record detailing the types and amounts of liabilities you recognize for the Canal Commission. Please also provide an explanation for each of these liabilities as you did in last year's hearing record.

Answer. The following tabulation provides the detail of the Commission's long term liabilities in the statement of financial condition.

	(In Thousands)
A. Accounts Payable - $37,731	
1. Accounts Payable	$ 37,731
B. Funded Accrued liabilities - $52,700	
2. Payroll payable and accrued	4,491
3. Employees' leave	48,209
C. Actuarial liabilities - $192,285	
4. Cost of early retirement	121,152
5. Cash relief annuitants	5,976
6. Employee repatriation	7,132
7. FECA	58,025
D. Other liabilities - $67,001	
8. Deposit liabilities	2,589
9. Advances for capital and booking fees:	
a. amortized	52,233
b. unexpended	12,179
	$349,717

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A. Accounts Payable:

1. Represents amounts payable at year-end to other government agencies, the government of Panama, contractors, employees, etc.

B. Funded Accrued Liabilities:

2. This represents amounts due to employees for days worked at the end of the fiscal year that are not paid until the subsequent year. Also includes payroll benefits payable to Commission employees.

3. This represents the estimated liability for Commission employees' accrued leave.

C. Actuarial Liabilities:

4. This amount represents the Commission's liability for the unfunded liability of the U.S. Civil Service Retirement Fund which is attributable to benefits payable from the fund to, or on behalf of, employees and their survivors under the early retirement provisions of P.L. 96-70.

5. This is the short and long-term liability of the Commission for future annuity payments to non-U.S. citizen employees, or their eligible widows, from the predecessor Canal agency who retired prior to October 5, 1958 and who are not covered by the U.S. Civil Retirement System.

6. This is the Commission's short and long-term liability for the repatriation of all eligible U.S. citizen employees and their families.

7. This is the Commission's short and long-term liability to the Panama Canal Commission Compensation Fund for job related injuries as prescribed by the Federal Employees' Compensation Act (FECA).

D. Other Liabilities:

8. This represents estimated amounts held in trust by the Commission for customers as guarantee for tolls, materials, supplies, etc. or services to be performed by the Commission. Also included are amounts payable on postal money orders from the predecessor agency, the Canal Zone Government.

9. This is the portion of collections for the capital program in excess of depreciation recoveries which are programmed annually by the Board of Directors including:

a. Collections which have been utilized and are being amortized through depreciation offsets.

b. Collections not yet used, but programmed for future years.

S-65. SENATOR LAUTENBERG. For the capital program, please update the schedule of replacements cited on page 1121 of last year's hearing record. Do you still intend to replace the Rousseau as originally planned within 1990? Do you still intend the replacement cost to be roughly $4,275,000? Please also update your replacement schedule for launches as contained on pages 1121 and 1122 of last year's hearing record. Does the budget before us for 1991 include funding for all of the replacements cited in last year's record to take place in 1991? If not, why not?

Answer. The information follows.

Towboat Replacement Program

Name	Placed in Service	Age as of FY 90	Planned Replacement Year	Original Cost	Estimated Replacement Cost
				(Thousands)	
TRINIDAD II	1968	22	1991	796	4,961
SCHLEY	1968	22	1996	743	6,126
HARDING	1970	20	To Be Reviewed	799	To Be Reviewed
MEHAFFEY	1970	20	"	806	"
MORROW	1971	19	"	877	"
WALKER	1977	13	"	2,414	"
BURGESS	1977	13	"	2,502	"
PARFITT	1981	9	"	5,031	"
PROGRESO	1981	9	"	4,073	"
ALIANZA	1981	9	"	3,981	"
AMISTAD	1982	8	"	3,934	"
ESPERANZA	1985	5	"	2,574	"
PAZ	1986	4	"	3,683	"
GUIA	1988	2	"	3,776	"
LIDER	1988	2	"	3,507	"
McAULIFFE	1990	-	"	4,234	"
UNIDAD	1990	-	"	4,207	"

The ROUSSEAU was replaced as scheduled in March 1990 with the arrival of the tug UNIDAD. The actual replacement cost of the UNIDAD was $4,027,818.

Launch Replacement Program

Name	Placed in Service	Age as of FY 90	Planned Replacement Year	Estimated Repl. Cost (Current $'s) Thousands
MACKERAL	1968	22	To be reviewed	
CHUB	1968	22	"	
SNOOK	1970	20	"	
PIRAHNA	1974	16	1992	$750
ORCA	1974	16	To be reviewed	
DORADO	1975	15	"	
BOBO II	1975	15	1991	660
SKIPJACK	1976	14	1993	600
MAKO	1977	13	1995	670
QUAIL	1978	12	1994	600
SHRIKE	1978	12	2008	350
TETRA	1978	12	1995	670
DARTER	1979	11	1991	513
CORMORANT	1979	11	1991	513
HAWK	1979	11	1991	533
FRIGATE	1979	11	1993	559
PIKE	1979	11	1993	559
PARROT	1979	11	1993	608
GROUPER	1979	11	1993	608
HERON	1979	11	1995	638
SKATE	1980	10	1995	638
FLAMENCO	1981	9	2002	550
HYACINTH III	1981	9	2002	200
PARGO	1982	8	2003	550
BONITO	1982	8	2003	550
POMPANO	1982	8	2003	550
TINTORERA	1982	8	1996	750
ULUA	1982	8	1995	750
FLYING FISH	1983	7	To be reviewed	
RAY II	1983	7	"	
SAILFISH II	1983	7	"	
TERN II	1983	7	"	
COLIBRI	1984	6	1996	500
SEA HORSE	1986	4	2000	200
SEA LION	1986	4	2000	200
SEA OTTER	1986	4	2000	200
ALBACORE II	1987	3	To be reviewed	
TRUCHA	1987	3	"	
UMBLA	1987	3	To be reviewed	
XAREO	1987	3	"	
REMORA	1989	1	"	
MACABI	1989	1	"	
CORVINA	1989	1	"	
MANTA	1989	1	"	
MARLIN	1990	0	"	
CALAMAR	1990	0	"	

The budget before Congress for 1991 includes funding for the replacement of the launch BOBO II. Last year's record cited the replacement in 1991 of launches JUAN GRANDE & PAPAGALLO. Such citation was based on the expectation that those two launches would be received in 1991. But, due to having taken advantage of a Federal Supply Schedule contract, delivery was much faster and the replacements have been completed in fiscal year 1990. The rest of the replacements cited in last year's record for 1991 will take place as originally scheduled.

S-66. SENATOR LAUTENBERG. Please update the table found on page 1124 of last year's hearing record regarding cargo tonnage to and from the U S. by region. Please break out this table further to cite cargo tonnage coming to and from the Port of New York and the Port of Philadelphia, if possible.

Answer. A following table shows cargo movements to and from U.S. port regions during fiscal year 1989. Statistics by individual port are not maintained by the Commission.

Cargo Tonnage To and From the U.S.
FY 1989
(long tons)

	From	To
North Atlantic	7,458,424	12,984,473
South Atlantic	4,518,517	3,547,220
Great Lakes Ports	376,742	224,586
Gulf Ports	49,608,401	11,159,467
U.S. Other 1/	2,675,762	3,547,350
Alaska	627,496	36,219
Hawaii	288,520	125,193
U.S. West Coast	7,494,666	6,708,639
Total	73,048,528	38,333,147
All other countries	78,587,585	113,302,966
Total Canal Commercial Cargo	151,636,113	151,636,113

1/ Cargo not identified by region.

S-67. SENATOR LAUTENBERG. Please update the table on page 1124 regarding tonnage transiting the Canal by commodity group. What are your expectations for long-term trends in the mix of commodities transiting the Canal? What type of commodities do you think will grow in the future, and which will decline in terms of tonnage transiting the Canal? On what do you base these projections? How comprehensive a review is made annually to calculate these projections?

Answer. The commodity mix is not projected to vary significantly over time. Total Canal cargo tonnage is forecast to show modest long-term growth, increasing annually at slightly less than 2 percent. Commodities performing at relatively higher rates include reefer products and coarse grains. Modest increases are anticipated for containerized cargo and agricultural products. Commodities expected to show declines or sluggish growth include coal, automobiles, wheat, phosphates, scrap metal, and manufactures of iron and steel.

These commodity projections are primarily based on cargo forecasts developed by Data Resources, Inc. (DRI) and Temple, Barker and Sloane under contract to the Commission. Our own analyses of current patterns and factors influencing those patterns are used to adjust and fine tune those projections to ensure they are as up-to-date and accurate as possible. Key Canal trades are continuously monitored through extensive research of economic and trade material and periodic interviews with Canal customers and others.

The table below shows cargo tonnage by commodity group for fiscal years 1986-1989.

Commodity Groups
FY 1986 - FY 1989
(long tons)

	FY 1989	FY 1988	FY 1987	FY 1986
Canned & Refrigerated Foods	4,930,297	4,867,124	4,209,699	3,829,984
Chemicals/Petroleum Chemicals	7,625,173	6,813,593	5,844,896	4,644,869
Coal & Coke/ex-petroleum coke	8,934,416	8,575,848	7,922,123	10,206,208
Grains	29,916,909	35,865,209	32,368,451	22,938,107
Lumber & Products (including pulpwood)	9,445,437	9,533,369	8,709,668	6,919,050
Machinery and Equipment	2,433,746	2,655,984	2,927,343	2,907,632
Manufactures of Iron/Steel	7,850,408	6,843,052	6,972,074	6,700,380
Minerals, miscellaneous	3,479,103	5,121,083	5,111,744	4,825,126
Nitrates, Phosphates & Potash	14,203,571	12,137,220	12,002,681	9,947,115
Ores and Metals	10,508,990	10,333,817	8,980,917	9,789,562
Other Agricultural Commodities	5,159,964	5,419,339	4,859,632	4,742,013
Petroleum and Products	22,234,568	24,591,132	25,933,093	30,847,976
Miscellaneous	24,913,531	23,725,871	22,848,059	21,647,159
Total Commercial Cargo	151,636,113	156,482,641	148,690,380	139,945,181

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